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GASTRIC WORMS.

On Gastric Worms. By Joseph Klapp, M. D. one of the Physicians to the Philadelphia Alms-house Infirmary.

TO prevent misapprehension I beg leave to state, that abstract of the seat of the disease, nothing specific is meant by the expression *gastric worms.* Intestinal, and gastric, worms, are the same, though differently designated, as they happen to infest the bowels, or stomach. I have not been aversely led into this explanation, having ever been of the opinion, that an inaccurate terminology has constituted one of the material obstacles to improvement in every department of knowledge. The progress of medical science in particular has been retarded, by the introduction of a system (it should have been said a farrago) of terms, not only superfluous, but frequently inapplicable, and absolutely contrary to nature. Without entering into a discussion of the merits, if it has any, and the demerits, of that famed scholastic production to which I refer, I cannot refrain from remarking, however foreign from the design of this essay, that it is well calculated to remind one of the palace of ice which was erected by one of the good-natured Empresses of Russia, on the river Neva. We are told, that every beholder

was filled with admiration by its grandeur. But what was its fate? It was soon prostrated by the vernal sun. So it has been with the finely wrought fabric of the Edinburgh Professor. In the closet, or from the University chair, no doubt it has appeared wonderfully ingenious, and even splendid; but like the insubstantial palace of ice, it was soon dissipated into an airy nothing by the vernal sun of the bed side. For a more particular account of its demolition, the reader is referred to the writings of those distinguished medical reformers, Drs. Brown and Rush.

Without presuming on any thing like a certain diagnosis of worms in the stomach, it may not be improper to relate some of the most considerable symptoms which, in my circle of practice, have been remarked to attend the disease. A soreness about the epigastric region has sometimes been complained of; in a few instances I have known it attended with severe pain extending through from the stomach to the back. Pains of a less severe nature, have also been felt about the sides, and shoulders. Sickness at the stomach is apt to occur, more especially after eating. A dry, short cough has frequently been noticed. When worms advance along the œsophagus, and probably reach the pharynx, they have been known to produce a sensation of tickling in the throat. I am aware, it is held as a common opinion, that this sensation is merely a sympathetic affection, occasioned by the irritation of worms in the stomach, or bowels. "Thus," says a late eminent writer, "worms which are not felt in the stomach or bowels, often produce a troublesome sensation in the throat." This may sometimes be the case, but from having often remarked the symptom to take place, immediately prior to the emission of worms by the mouth, I have rather viewed the sensation as indicating their actual presence in the throat. Should this be correct, it will follow that worms in the throat and stomach constitute a more common disease, than has heretofore been supposed. In different cases I have perceived the symptom under discussion to be somewhat diversified. The feeling of one person was compared, by her, to that of a thread hanging in the throat, a sense of choaking, and a vomiting often quickly supervene to this state.

Worms sometimes creep up from the pharynx into the posterior nares, and from thence make their exit through the anterior

opening of the nostrils. In one case a round worm seven inches and a half in length passed through the right nostril, the patient for near a week before had been affected with almost constant pain in the left ear. As soon as the worm was discharged, the pain ceased. Certain outward applications to the region of the abdomen have been known to cause worms to pass up from the intestines into the stomach. In two or three instances the application of garlic poultices to the umbilicus, was followed by a strangling, and a discharge of live lumbrici from the mouth. In one of the cases the worms were both large and numerous, occasioning much distress. From thence I infer, that all such applications, including aloes and tobacco, which are also sometimes used, are improper, unless the patient is at the same time under the influence of some efficient anthelmintic. Delusive appearances of the disease of hydrocephalus have in several cases been satisfactorily traced to the irritation of worms in the stomach. I have often prescribed for epileptic fits from the same cause; and very lately I have witnessed a fatal case of insanity from an extensive tænia in the stomach. The irritation of worms in the stomach in some instances produces a great prostration of strength, and a fever of a low character. This is reasonable when we advert to the many facts which evince how much the strength of the whole system depends on the proper tone or excitement of the gastric viscus. I have lately heard of an adult patient who in a paroxysm of worms, a disease with which she had long been affected, vomited up a quantity of live tænia, fell into a typhus state, and died. A similar case occasioned by lumbrici, will be related in the latter part of this communication, which had been under treatment for some time, before its true cause was discovered. It has been doubted whether worms are capable of exciting an idiopathic fever. Waving all disquisition on the theory of fever, I must say that when in the stomach, they do occasion fever. In my observations, I think there could be no deception. The febrile symptoms were attended with local affections which it was reasonable to impute to the irritation of worms, and by the employment of anthelmintic means, as was anticipated, worms were destroyed, the hot skin became cool and moist, the pulse fell from 118 to beneath 100, and the furred tongue became clean. In attaching a degree of importance to worms, as a cause

of disease, I am sensible that I am departing from the fashionable way of thinking on the subject, and which some may deem a point of sufficient moment to advert to. But, in thus opposing medical authority, I will take the liberty of remarking, that what one has repeatedly seen he is apt to believe, and therefore I at least hope that I shall not be taxed with insincerity, however I may expose myself to the charge of being singular. Though it remains an indisputable fact, that worms are many times discharged as an accidental consequence of general disease, yet in the whole extent of its application I am very far from subscribing to the principle (I might have said the common-place remark) that "it is the fever which produces the worms, and not the worms the fever." Physicians, in their zeal for medical improvement, like other scientific men, are apt to fall into the error of extremes. Formerly medical books of almost every kind, periodical and systematic, teemed with cases and descriptions of worm fevers; and latterly, since the medical mind has had a different turn given to its thoughts by a few eminent men, the subject is almost as much neglected, and as little heard of, as if worms of all things were the most harmless, and quite incapable of affecting the healthful operations of the body. I beg to be permitted to make an offering of my humble mite in opposition to this prevailing error.

Several years ago I had the unhappiness to lose a patient from worms in the stomach. Every plausible remedy which we are directed to make use of by the rules of medical practice, was unavailingly resorted to. The disease had every appearance of having been produced exclusively by the cause suggested. The event of this case served to lessen my confidence in the means we are directed to apply in systematic works. My attention was forcibly drawn to the subject, and I trust not without some good resulting. From the known efficacy of ol. terebinthinæ in intestinal worms, and from the active qualities it possesses, I was led to make trial of it for the destruction of worms in the stomach. The following statement of my experience will best show what has been my success with this remedy. Previously, it may not be improper to remark, that it was in the year 1816 I first began the use of the turpentine; I have been induced to make this observation from finding, on looking over my cases, that the year of their occurrence has not been noted.

On the 1st of May H. P. of a delicate constitution, and sixteen years of age, became my patient. He informed me that for a length of time he had been affected with soreness, and pain in the region of the stomach. At times he had experienced a swelling of the epigrastrium, a rising in the throat, with a sense of strangling. Occasionally he had been vertiginous, and he also complained of a short cough. I directed him to take fifteen drops of the ol. terebinthinæ every morning, noon, and night, in a little sweetened water. I did not see the patient again until the 5th, when he reported himself better. The irritation of the stomach had sensibly abated. The medicine was continued. On the 6th he had taken a cathartic, which had brought away one worm. The rising in the throat, and the spells of strangling had entirely ceased. Complains of pain both in the stomach and abdomen. Turpentine continued. The patient was not seen again for three days, when I was told that since the 6th he had voided an additional large lumbricoid worm. Appearing in every respect well, and the patient considering himself as such, he was permitted to stop with the turpentine. He was ordered a further purge, and my attendance was discontinued.

T. M'P. aged three years, for the last twelve or fifteen months, has suffered frequent attacks of pain in the belly, has a tumid abdomen, and a sore nose from a habit of picking it. He is troubled with a dry cough, his appetite is voracious, and his nights restless. A year ago he gave a fair trial to the spigelia and calomel, without benefit. He began with eight drops of turpentine three times a-day on the 5th of October.

October 8th. The belly was less swelled, he had become somewhat cheerful, and his appetite was remarked to be more regular. A cathartic of calomel, and ol. ricini, was prescribed, when done operating to resume the turpentine.

10th. Though the purge had operated freely, no worms had been discharged. The child having nearly ceased to complain, his case was no longer attended to.

The circumstance of no worms having been discharged in the above case, and yet the symptoms having been removed, will perhaps be considered somewhat singular. It therefore becomes neces-

sary for me to state here what might have been previously done, that in a majority of the cases in which I have tried the medicine, and I dare say I have used it at least in fifty, but few entire worms have been discharged, in many instances they have been voided partly decomposed, broken into many pieces, in shreds, and sometimes no trace of worms could be perceived in the stools; yet the relief from the symptoms has been prompt, and durable. Two considerations I think will furnish an explanation of these apparently adverse occurrences: First, that in the generality of cases the stomach in all probability does not become infested with many worms at one time; and secondly, as soon as worms are deprived of life by the action of the oleum terebinthinæ, they become subject to the digestive process of the stomach.

This account of the operation of our medicine is strengthened by a reference to a series of experiments performed in the year 1771 by the late Dr. Rush, to ascertain the comparative anthelmintic virtues of a variety of substances. The professor made choice of the earth-worm (the lumbricus terrestris) for this purpose, which is admitted by the naturalists nearly to resemble, in its structure, manner of subsistence, &c. the round worm of the human body. He found that this worm placed in the oil of turpentine, died in six minutes, while the Carolina pink-root in a state of watery infusion, and calomel, required thirty-three minutes the former, and the latter forty-nine minutes to produce the same effect.

I have many times observed that the voiding of dead worms has been followed by a more evident relief from the symptoms than the voiding of live ones; the former I suppose to have been of the gastric kind, or to have come from the stomach after having been killed by the concentrated action of the turpentine, while the latter have been driven from the bowels by a weaker operation of the medicine in a diffused state. When we advert to the difference of sensibility, &c. between the stomach and intestines, it is reasonable to expect that greater relief would ensue from the removal of worms from the former than the latter.

Whenever the symptoms were removed, which in my opinion denoted the presence of worms in the stomach, it will be perceived, that the medicine was omitted. The extent therefore of

anthelmintic power throughout the alimentary canal possessed by it, is not made to appear.

On the 2d of May I was requested to visit R. R. aged 6 years, who, I was told, had suffered three different attacks of epileptic fits. Her parents gave me the following account of the last attack: During the 26th and 27th of April she had a fever, with a frequent rising in the throat, she had a teazing cough, was frequently observed to grind her teeth, and on the 28th she fell into convulsions, which continued with much violence for half an hour. An infusion of Carolina pink-root, and a purge of calomel, had been given to her with the effect of causing her to void one worm, but her health had not thereby been improved. When I first visited her she was still labouring under all the above symptoms, with the exception of the convulsions, and a recurrence of these was much feared. My prescription was, twelve drops of the turpentine to be taken every morning, noon, and evening.

May 5th. The disagreeble sensation in the throat, and the frebrile symptoms have abated, but the cough continues bad. Some strangury has been produced by the medicine. The bowels being costive, she was directed a purge.

6th. During the operation of the purge, one dead worm was discharged. Take eight drops of the turpentine three times a day for a while longer.

7th. Much better. Continue the medicine.

9th. The child appearing so perfectly well in every respect, I conceived it unnecessary to take any further notice of her case. Therefore I advised the turpentine to be discontinued, ordered her a mild cathartic, and withdrew my attendance.

E. A. aged 3 years and 9 months, was seized on the 28th of March with pain in the belly, nausea, and vomiting; symptoms of fever presently followed, and in a day or two more her stomach became so irritable as to reject every thing as soon as swallowed. Her face became flushed, the pupils were dilated, and she appeared very sleepy. My attendance began on the 2d of April, and, under an impression that her several complaints proceeded wholly from the irritation of worms in the stomach, I ordered her to have 8 drops of the turpentine four times a day, in sugar and water.

April 3d. I was informed that the first dose of the medicine had

been thrown up, and in a short time after taking the second she again began to vomit, and brought up a dead round worm.

4th. The puking had ceased, but the pain in the abdomen continued. This day a large round worm was passed per anum. The bowels being confined, she was directed to be purged with senna.

5th. Was not able to keep the senna tea on the stomach, complains much of pain in the bowels; the tongue is covered with a brownish fur, and the pulse is 120 a minute, weak. Prescribed 6 grains of rhubarb and 4 of calomel, to be taken immediately.

6th. In the course of yesterday two dead lumbricoid worms were vomited up, and passed one downwards. The powder could not be retained on the stomach. Last evening the use of the turpentine was resumed, when the vomiting ceased. To-day the fever has abated, but the pulse remains accelerated. Directed the turpentine to be continued, and 7 grains of calomel to be taken at one dose.

7th. The fever is quite gone off, and the stomach is composed. The powder occasioned five stools, and brought away a number of worms, not one of which was alive. To-day the child is playing about the room, and the turpentine was continued.

9th. Continues better, and has passed another dead worm. Continue the turpentine.

10th. To-day she has had three stools, and passed another worm.

11th. Two more worms have been voided.

13th. The patient appearing well, the turpentine was omitted, as well as my attendance.

The prescription of turpentine, when there has been arterial excitement in the case, may be regarded as injudicious. The febrile affection I have viewed as entirely owing to the local irritation of worms in the stomach; it has from thence appeared a more rational procedure to direct the curative means to the cause, instead of consuming time in perhaps fruitless endeavours to counteract effects. Under such circumstances, I believe venesection would be of questionable efficacy; there being nothing so well calculated to compose irritated actions, as the immediate displacement of the cause which excites them. Dislodge this in the first place, as you would a grain of sand from an irritated or an in-

flamed eye, and then if the fever does not subside with the other symptoms, the antiphlogistic treatment will be fairly indicated.

E. H. five years of age, of a gross habit of body, was attacked on the night of the 20th March, with a rising in the throat, and frequent spells of strangling. 21st, she was thought something better; 22d, a vomiting occurred, with severe pain in the umbilical region. I first visited her on the 24th; she had a thick upper lip, and was much addicted to the practice of picking the nose. Her face was flushed: the pupils appeared large; pulse 120; pain almost constant in the belly. She vomited frequently, and each spell was usually preceded by a dry, suffocating cough. Mrs. H. informed me, that during the first days of the child's illness she had given her a tea, made of the Carolina pink-root and senna, which had operated freely as a purge, but had afforded no relief from the symptoms described. Ten drops of the oil of turpentine were ordered to be taken four times a day.

March 25th. The pulse has become soft, and is reduced to 108. Face is not flushed to day. The pain in the belly is more severe, but has changed its situation lower down. In a few minutes after taking the first dose of the turpentine she became very uneasy, and threw up from the stomach a large round worm. At the present time she is free from both nausea and vomiting. Half an ounce of castor oil was directed.

26th This morning I found the little girl playing about the room free from fever, her pulse not more frequent than natural. The oil had operated once in the night, since which time she had ceased to complain of pain in the belly. Turpentine continued.

27th. She has a good appetite, and appears quite well. The medicine to be continued to-day, and in the morning six grains of calomel to be taken.

29th. Had three stools after taking the calomel, and two worms in a partially dissolved state were voided. Attendance omitted.

H. W. Seven years of age, of a weakly constitution, was placed under my care on the 6th of August. I received the following history of his complaints. For a length of time past he has been affected with a diarrhœa, an enlargement of the abdomen, frequent

pain in the bowels, and a short, dry cough. Three or four days ago he was seized with a rising in the throat, usually ending in a sort of strangling. After having been affected in this way for a day or two, a vomiting ensued, when he threw up five round worms. On the morning of my visiting him, a spell of rising in the throat, and strangling was followed by a fainty fit, which much alarmed his parents, and was the cause of my being sent for. He was directed to take 10 drops of the ol. terebinthinæ, three times a day.

Aug. 12th. The medicine had been regularly given since the 6th inst. and every symptom of indisposition has disappeared. After directing a cathartic of rhubarb and calomel my attendance was withdrawn.

On examining my ledger I find that this case occurred last year, since which time the little fellow has not been troubled with the symptoms of worms in the stomach. At this time (the date of this communication), he is under treatment for a pleurisy.

For the history of the next case which occurred in the practice of our Infirmary, I am indebted to the kindness of Dr. Darrach, who at that time was senior pupil in the institution.

July 31st, 1818, Sarah M'Devit, aged 30 years, came to the Alms-house three weeks ago as a medical patient. She complained of debility, lowness of spirits, also of an oppression at the stomach, and a dry cough. The oppression is at times attended with pain in the stomach. She complains of head-ach, and vertigo, with a momentary loss of sight upon rising to an erect position. These symptoms were present a week before the patient came to the ward, but were in a good degree removed after discharging two worms from the stomach. From the description she gave of them they were the lumbricoid. The symptoms returned after a few days, with an increase of debility. Her appetite is also very much affected, one while ravenous, and again entirely gone. She was treated for a few days by stimulants without reference to the worms, vol. mixture, brandy and porter, &c. were all prescribed. After a few days the patient became stronger, but still complained of her stomach and head. An emetic was ordered, which caused the evacuation of a lumbricus worm.

Afterwards the worm powder of Dr. Rush, viz. muriate of soda and carbonate of iron, was prescribed. She used this althelmintic for two days, but with no benefit, when Dr. Klapp prescribed oleum terebinthinæ, 15 drops every four hours. Saw the patient the next morning, she had taken the medicine three times, and with evident advantage. She complained less of the heaviness about the stomach, and the pain of the head; but has yet a gnawing pain in the upper part of the stomach. The bowels have not been opened for the last 48 hours. Saw the patient the following day, and found her completely relieved of every disagreeable sensation. The bowels not yet opened; Dr. Klapp saw her shortly afterwards, and directed the turpentine to be omitted. He ordered a purge of calomel and jalap to be given, requesting the patient's observation if any worms be evacuated. The patient could not detect any; the bowels were opened a second and a third time, but no worms were voided. She is perfectly well, feels strong, active, and free from every unpleasant sensation. Discharged cured.

In addition to the above cases, I shall relate but one more, which may suffice to illustrate the practice.

Mrs. T. aged about 23, in the evening of the 6th of January was attacked with pain in the stomach, and a vomiting; while in this state I visited her, and directed hot fomentations and a cathartic.

Jan. 7th. The urgent symptoms of last evening were removed. To day she acquainted me of her having been affected for several months, with pain in the upper part of the abdomen, and occasionally with a rising in the throat. For the last four weeks she had suffered very nearly a constant pain under the ensiform cartilage, now and then extending through towards the spine, with a swimming in the head. Suspecting from the symptoms that she might be troubled with gastric worms, I directed her to take 15 drops of the oil of turpentine three times a day.

13th. She has less pain in the stomach, the rising in the throat has subsided. Directed a cathartic of senna.

15th. The senna operated powerfully, since which she has been free of every symptom of indisposition.

The very serious event, which first awakened my attention to the above inquiry, has already been stated. Virulent cases of gastric worms are liable to occur every day, and in every one's practice; if then what I have ventured to communicate, should at any time prove instrumental to the saving of the life of a single individual, as I believe the practice has repeatedly done in my hands since becoming acquainted with it, I shall be amply rewarded for the trouble I have had, in prosecuting the subject, and laying it before the medical profession. The discovery of truth in science is always satisfactory to the mind; but the preservation of human life affords a real ecstacy of the heart which language is inadequate to describe.

Philadelphia, Feb. 13th, 1820.

On the Effect of Pressure upon Tumours of the Breast. By Ezra Gillingham, M. D. of Baltimore.

No fact appears to me better ascertained, than that the extirpation of a scirrhous mamma, is a very uncertain preventive of the carcinomatous ulcer. Since the celebrated observation of the first Monro, which so often has been reported, opinions have eagerly been given concerning the efficacy of the operation. There is no occassion to controvert any of them. I believe that every candid physician, at least of this country, who has made inquiry into the event of his operations, will acknowledge all that I desire: that, in proportion to the increase of his experience in scirrhous complaints, has been the declension of his confidence in the successful event of their removal by the knife.

It is a possible circumstance that some surgeons may have been so fortunate as to have met with very few cases, which had proceeded too far to endanger the success of an operation. It is possible that those which have come under their care, may have had only a local origin, and may not have been the signs of a contaminated constitution. The patients also may have been

generally young, and the disease not malignant. But when a surgeon's success is almost uniform, a suspicion must arise concerning his accuracy of observation, which can be removed only by a minute detail of the history and of the termination of his cases. The sequel of this sketch may also lead to the suspicion, that some of the patients who writhed under his knife, were not even affected with scirrhus.

The acknowledgement of surgeons, that they have very often been forced to lament their want of power over the disease of which I am treating, must remove any surprise that the proposal of Young to remove it by pressure should have excited so much attention Young was viewed with suspicion, and perhaps his book does not possess a character which is calculated to remove it; but his proposal deserved a fair experiment, and it obtained one. After passing through a severe and candid trial in England, it failed. It will be useless to give a detail of its history, as no person conversant with the English periodical works, will need my instructions. In a letter now lying before me, from a very respectable physician of this city, at present in London, dated Nov. 30th, 1818, there is the following information: "The treatment of scirrhus by pressure has gone completely out of fashion."

Very few experiments of the efficacy of Young's plan have been made on this side of the Atlantic. Several physicians of Philadelphia have resorted to it, but I believe no history of their practise has been made public.

In this city there has been but one case. It was the case of a parent, whose grave the grass has not yet covered. The mammary gland in which the disorder was seated, was extirpated. The disease returned. The bandage was applied for four months, with minute and anxious care. It failed.

During the period in which this case was under care, I became acquainted with a very interesting instance of a tumour in the left breast, with which a young woman had been afflicted from her childhood. At its commencement it was very small. Its growth was slow, and it had given no pain, nor any of the burning sensation which accompanies scirrhous complaints. It had

been, however, as far as I could ascertain, uniformly pronounced a scirrhus, until the time at which it came under my notice. The patient became eager to have it extirpated. Several physicians of respectability were applied to, to perform the operation, but fortunately for the subject, circumstances had always interfered, to produce delay. Finally, the skin immediately covering the tumour became involved in the disease; it inflamed and burst open. An operation now appeared unavoidable, and the young woman, under the dreadful apprehension of a carcinomatous ulcer, rendered more distressing by having a young child, and being in a state of lactation, determined, at all hazards, to have the excision performed.

The professor of Anatomy, Dr. Davidge, was at this time applied to, and determined to extirpate the disease. My assistance was requested, and we proceeded to the house of the patient, prepared to use the knife. The external appearance of the tumour was the following: a light-coloured fungus, flat on its surface, and about $1\frac{3}{4}$ inch diameter, projecting a considerable distance beyond the edges of a round opening; possessing very little sensibility; having no smell, and the skin of the neighbourhood, being without discoloration or other signs of disease. The tumour was hard, appeared to be about the size of a large lemon. The glands of the axilla were enlarged. After a careful examination, it was determined at least to defer the operation, and after a short consultation, we concluded that the tumour had no proper marks of scirrhus, and that a fair experiment might be made, of the efficacy of pressure. The application of the bandages was committed to my care.

I made a very strong compression by two rollers, each about seven or eight yards long, and $3\frac{1}{2}$ inches wide; carried over the tumour, and the shoulder of the opposite side, and occasionally brought under the sound breast. After a short application, the size both of the fungus, and of the the tumour, were surprisingly lessened; and at the termination of five weeks, what remained of the fungus I took off with the knife. The tumour was now very small, and the patient being extremely anxious to be entirely dispossessed of it, Dr. Davidge cut it out, with a small portion of

the gland in which it was embedded. The tumour was nearly of the shape of a mulberry, and but very little larger, having a covering resembling a cyst, which was, however, formed merely by a thickening of the membranous part of the gland which surrounded it. There were no signs in it of scirrhous structure.

It appears to me that some very important lessons may be derived from the perusal of this short sketch. It will teach caution in pronouncing diseases to be scirrhous, merely because of their situation, duration, and hardness. Probably a majority of the cases which have been relieved by pressure, since the proposal of Young was made, and which have been pronounced scirrhous, only testify a want of discrimination in the surgeons. Indeed there is a peculiar necessity for caution, because, in addition to the success of pressure, there are important instances produced by Abernethy, where diseases having the appearances of scirrhus, have been cured merely by an attention to the state of the alimentary canal. It will teach also, that although pressure has failed in the hands of the European surgeons where the disease was the genuine precursor of carcinoma, yet that in cases of doubt it will be always proper to make use of the measure. There are seldom instances in which the patients have suffered pain from its application. To my patient, the bandage produced no suffering, which I believe to be the only obstacle to its employment.

Baltimore, 2nd. mo. 1819.

The young woman continues free from disease at the present date, fourteen months after the extirpation of the tumour.

1st. mo. 24th, 1820.

On the efficacy of Caustic Potash, applied to the Spine in the treatment of Tetanus. By Joel Lewis, M. D. of Pittsburg, Penn.

On the 11th of October, 1817, I was requested to visit Ben. Moore, principal armourer in the U. States arsenal near this place. He was thirty-five years of age, of temperate and industrious habits, and of a robust constitution. Eight days previously, viz. on the third of the month, a heavy piece of timber fell on the great toe of his left foot, and although the skin was unbroken, I have seldom seen so severe a contusion, and so intense a discoloration from the extensiveness of the extravasation.

4th. Some rigidity of the left side of the face, jaw and neck, but not such as to prevent him from pursuing his avocation.

5th and 6th. Rigidity increased; on the evening of the 6th, being somewhat apprehensive of the tendency of his disease, he consulted a physician of some eminence. He advised the free use of brandy, laudanum and ether.

7th, 8th, and 9th. Rigidity increased, and spasm more permanent. On the evening of the 10th he was suddenly seized with a severe pain at the scrobiculus cordis, and a sense of retraction towards the spine. The laudanum, ether and brandy were increased, and the pain gradually abated, till the morning of the 11th, when he was seized with another paroxysm of pain—spasms of the thighs and involuntary tremors of the whole muscular system, acute pains shooting from the neck to the jaw, and along the course of the masseter muscle; and distressing cardialgia were now superadded to the preceding symptoms, and increased his alarm. This was the unpromising situation in which I found him.

Having seen Dr. Hartshorne's paper on the use of caustic potash in tetanus, it occurred to me as the only remedy which afforded any probability of success. The potash was therefore rubbed for several minutes over the second and third cervical vertebræ, until an eschar was formed something larger than a dollar. A pledget of lint, spread with simple cerate, was laid on the eschar, and warm emollient* poultices were applied to the injured toe, and renewed every

* Severe *local applications* had been made before I saw the patient.

few hours. He obtained immediate relief from the severe symptoms, and there was a gradual mitigation of every symptom, till the fourth day, when he sat up in a rocking-chair. He accidentally rocked on a coal; the discordant sound occasioned an excruciating pain through the injured toe, as if it had been transfixed by a pointed instrument. This pain was consequent to any sudden and alarming impression for many days.

Immediately after the application of the caustic, a soreness was felt in the left side of the forehead, which gradually pervaded the whole of that side of the face. The rigidity disappeared as the soreness approached. There was a gradual recession of all the symptoms: Those last observed were—1. Shooting pains in the back of the neck; these returned several times when exposed to cold, and for the last time on the 25th of the month, with some severity. 2. The immobility of the lids of the left eye; this continued for several months. 3. A soreness at the origin and insertion of the masseter muscle of the left side, which has continued from the time of his indisposition to this date—a period of *fourteen months.*

Sketches on Venereal Complaints. By J. C. Rousseau, M. D. of Philadelphia.

It is a pleasing reflection to anticipate the beneficial effects of our labours; but we feel an inexpressible gratification in witnessing the time when such an anticipation becomes realized, especially when our discoveries are opposed to the general torrent of received opinions.

The opinions I published in the month of January, in the year 1807,* on syphilis, although well supported by facts, were treated by some as chimerical, by others as heterodox; but few were started by them; still they made a few proselytes, and produced a great alteration in the mode of treating the diseases of the genital

* See the Philadelphia Medical Museum.

organs, which, to my knowledge, have not only become of much rarer occurrence, but more mild in their effects upon the human constitution, in our city.

An extensive practice in this disease, enabled me to collect observations entirely out of the reach of the generality, and sentiments of philanthropy stimulated me to push my researches perhaps beyond the common range, or the usual course of human pursuits. When I differed from the rest of my cotemporaries, I was compelled to it by the evidence of my own senses; and the sole desire of exposing truths upon which life was too often depending, and of preventing infirmities heaped upon the human race by erroneous and baneful theories, gave the impulse to my feelings.

The extensive collection of facts and cases I was already possessed of at that time, would have enabled me to go a much greater length, had not my first object been, to explore and sound the general opinion; for I was in great doubts whether the exertions made to correct an evil, so generally borne in silence, would not, in an unpropitious time, produce more harm than good, and frustrate the benevolent end I had in view.

Well aware that, the arena once open, no harm could result from my not entering it at once boldly, that I could expect some to join me, and would by the delay gather strength myself, and find fewer opponents at a more advanced period, I gave up the idea of exposing more fully my views of the subject, except privately, or in learned societies, and among professional characters, whenever the opportunity would be offered.

Every year corroborated my opinions, and made a few proselytes. The same opinions sprung in several remote countries, and the medical journals abounded in publications tending to show, that medical men had been egregiously mistaken in their views of the venereal disease.

The progress however was but slow, and the lentor was not to be looked for in a deficiency of talents in the medical world, but well in the difficulty attending all medical pursuits, and particularly an inquiry so intricate and hidden to the human eye; every one having powerful motives to keep back every kind of

information tending to elucidate the disgusting and unfruitful researches of the inquirer. Success might have been contemplated as the best arm to oppugn error and party prejudice; yet all the success obtained in vanquishing an enemy always concealed in dark recesses, could avail but little to spread the laurels of victory; but few of the hundreds of cures performed according to my views, were or could be known; but, spoken of under the confidence of friendship and intimacy, they nevertheless established, beyond doubt, that the morbid state of the genital organs, under the received name of syphilis, has been, and now is, as I have advanced, and endeavoured to prove it, at the period above mentioned, "no more *a principio*, than a disease generated by an acrimony of the fluids secreted by the organs of generation, without any previous infection." "That the disease may become infectious, and will assume different forms, according to the different parts to which the virus once generated is applied, the constitution of the individual receiving it, the vitiated quality of the fluids secreted by the infecter, and the affinity between the fluids and solids of the infecter and those of the infected."

This opinion, as heterodox as it might then, or even now appear, to those who had few opportunities of collecting observations, is supported by so many incontrovertible facts, and of so frequent occurrence, that it has gained and will gain ground daily; and, as I have long anticipated, be, ultimately, firmly established.

That a disease should vary in form and intensity, is nothing uncommon, nor to be wondered at; this happens in various affections of the vital organs, and from causes both unknown and unforeseen.

That a disease, or rather a tribe of morbid affections incident to the genitals, should assume changes,—increase or lessen in virulence at different periods, and among different nations, or in the same nation, among different classes of people, may perhaps appear singular and mysterious; but with a little reflection, and a degree of attention to the functions that the genital organs have to perform, the hardships they are exposed to, and the whimsical and hazardous services demanded from them by passions, uncleanliness, and turpitude, all matter of wonder is at an end. It is, in my opinion, quite unnecessary, and indeed it is impossible, to

create new names for the better elucidation of the various symptoms of the same disease, if a series of morbid affections, scarcely ever the same in appearance, intensity, or site, may be considered as an unit, and ranged under the same appellation.

As well and with as much propriety might we attempt to distinguish by particular names the fractures of bones or the laceration of the skin, according to the causes and agents; although it would be of extreme importance to the modus medendi to be acqainted with them.

Yet, if a litany of the various affections of the genital organs, could have this effect, to convey by each name, an idea of the manner in which the injury was received, then should we be thankful for the acquisition.

We are however, far, very far indeed, from having made even a few steps towards such an improvement.

A chancre is still a chancre, whether it be produced by the causticity of the matter, upon a sound cuticle, or on a slightly punctured or abraded, or lacerated surface: whether at the time of the infection the virus was in a state of activity, or blandness; whether the organs were under a violent state of excitement, or in a temperate mood; whether the application of the virus have been reiterated, not only from the same but from various sources; and above all, whether the organs, after the infection, have been kept *dolentes*, or *juvantes*.

A chancre is but a chancre, upon the glans, the inner or outer surface of the prepuce, upon the frenum, the linea alba, or upon the lips of the meatus urinarius; it will, however, in every case, require a different treatment, and be more or less speedy or tardy in its cure; for it will present obstacles not at all resulting from the virulence of the disease, but simply from its location.

Supposing the matter of a chancre to have been deposited upon a surface abraded either before or during sexual connection, what will avail the elaborate descriptions of a chancre, and who will say, *prima inspectione*, whether the ulcer, then extremely irregular and not answering the adopted description with the smallest degree of accuracy, be a common ulcer, or a chancre, or

a syphiloid affection, and decide whether mercury shall be resorted to or not?

Hence have resulted so many clashing opinions, and so various modes of cure, without a due regard to the nature of the disease, its cause and its location. Hence all the boasted specifics have successfully fallen into discredit, and sunk into oblivion.

By chance the most ignorant practitioner, quacks, and old women have acquired fame, and the most eminent physician deluded by his faith in established authorities, been baffled in his efforts, and perhaps been the cause of irreparable injury.

I have never been induced to believe in the existence of a syphilitic poison, *sui generis*, and capable to reproduce the same disease, characterised by the regularity of its symptoms, and its time of duration, like all other specific virus. But, that the materials for their production exist in the animal economy, that a certain state of the animal fluids secreted not only by the genital, but by other organs, are susceptible of generating a disease and infect similar organs coming into an immediate contact, I have always been ready to admit, this being fully evidenced by the recurrence of many other diseases, as the small-pox, the measles, &c. which find their births in the first individual, and are propagated by various causes. I am equally convinced by experience that when the secretion of the genitals has been contaminated by the effects of an injudicious administration of mercury, the diseases communicated by them were always more virulent, and required the assistance of this valuable but too much abused medicine.

It is indeed a sorrowful truth that, with a view and the desire of preserving morality, the ravages of the diseases called syphilitic, have been much exaggerated, and it is also no less true that by too much zeal, those moral views have never b een obtained, and millions of lives sacrificed. But that the error should not have before this present period, been more generally acknowledged, must appear rather incredible, after the remarks and opinions published in the 4th volume of Coxe's Medical Museum on the 21st of January 1807. There, are related, thirteen years ago, the same facts that for the first time started the editors of the Medico-Chirurgical Journal for July 1818, in Dr. Burder's valuable inaugu-

ral dissertation. It is indeed not a little surprising to find those gentlemen venting seriously their astonishment in commentaries upon the various opinions existing respecting syphilitic affections, and declaring exultingly to the world that they rescue from the "mouldering shelves of the alma mater," a document that they firmly believe contained facts, unobserved and unrevealed before.

Loud remonstrances have been, from time to time, made against the abuse of mercury, and I have myself for many years past proven by experiments upon myself to the knowledge of several physicians of our city, that in the majority of cases it was unnecessary, and in general did more harm than good. I must however acknowledge, that the evil has been produced rather by the abuse than by the drug itself, which in careful experienced hands may be very salutary, and has now become an indispensable article of the materia medica.

It is a pleasing consolation to know, and I am extremely glad to be able to declare, that for many years back the diseases incident to the genital organs have undergone a considerable change, but at the same time I must confess that this has been obtained rather by an alteration in the causes which produced and aggravated them, than by an abatement of the virulence of the poison. The modus medendi, which constituted the worst portion of the sufferings of the patient, has received many beneficial improvements, and as long as this will become one of the principal objects of the attention of the physician, and a rational method is pursued, those diseases will not desolate the world more than many others, perhaps not as much as those that assume a less terrific appearance.

It is worthy of notice, that a number of females that I have cured ten and twelve years ago, by a strict adherence to the rules of cleanliness I have inculcated and taught them, have never since contracted any disease, although they have been perhaps more exposed; and had, to my kaowledge, intercourse with individuals in a state of active disease, and then under my care.

I feel a duty, although it be against my feelings, to express my reasons for dissenting from many respectable opinions respecting the secondary symptoms blamed upon a disappearance of the pri-

mary symptoms of syphilis, without the use of mercury. In doing this, I am compelled by the evidence of my own senses, assisted by a close observation in almost all cases that I have taken the trouble to investigate.

In all those instances of secondary symptoms that have fallen under my care, I have not yet been able to find a case in which mercury had not been used by the patient at one time or other previous to the existing symptoms. It is however highly important to observe, that it is extremely difficult to extract the confession from the patient. Besides the many reasons that create this difficulty, either through the shame or other hidden motives that may dictate to conceal a conduct deemed unprincipled and immoral, ignorance, bona fide ignorance, is perhaps one of the most powerful obstacles to oppose a fair investigation.

Besides, mercury is a drug so generally used, that there are few individuals that have not been more or less under its influence at some period of their life, with or without their participation or knowledge.

The majority of the quack medicines, and most all the specifics advertised for the cure of syphilis contain mercury under various forms, and receive support by the many chance cures obtained from them. On this subject alone hundreds of pages might usefully be filled, and the rationale of those cures exposed, but men of science are conversant in those matters.

That the facts selected from the British navy should be brought forward to substantiate the opinion of the secondary symptoms being owing to the entire dereliction of mercury in the cure of syphilis, is rather assuming a position untenable, will appear plausible if not evident, by the following reasons.

1st. It is well known that sailors generally take a little stock of medicines with them, going on board for a long voyage.

2dly. It is well known that most all the pills vended for the cure of every disorder, and patented, contain calomel.

3ly. That mercurial ointment, or precipitate salve, is hardly ever excluded from that medical stock.

4thly. That primary symptoms of syphilis seldom take place on board, because their appearance is too short after sexual con-

nection, and if they do take place and disappear, as it is advanced, without the use of mercury, it is paradoxical to the highest degree to pretend that mercury is absolutely necessary for the removal of the primary symptoms.

5th. That it is more probable that those that are shipped, oftentimes are just out of the hands of some physicians, or some quacks, or some old women unapprised of the quality of the medicine they have been taking.

6th. That the secondary symptoms, too often the result of the injudicious or protracted use of mercury, re-appearing at long, extremely long periods after the administration, might then have been called primary, under a false impression, or ignorance of the fact alluded to.

I have seen those secondary symptoms, that by the by are remarked on those that received a deleterious influence from the use of mercury, no matter for what purpose, and in what disease, ten, fifteen, and more years after the first tint imparted to the constitution, which symptoms are now, gratuitously related to syphitic, and called syphiloid diseases.*

* As I was writing this, a female between twenty and twenty-five years of age, who had consulted me last summer for an ulcer she had on the leg, and whom I advised to go to the Alms-house, judging a state of rest to be absolutely necessary for the cure of her disease, came to consult me again for a disease of another nature.

She had been kept confined under a salivation in that hospital for several months, and had just come out. Under necessitous circumstances, she was obliged to make use of her natural means to procure some assistance. On the first connection she having experienced a good deal of pain, came immediately to me.

On examination I found she had ulcers at the entrance of the vagina, one of which was of an extremely bad appearance. Her surprise was extreme when I informed her of her situation, and she declared, which I knew to be the truth, that she had nothing of the kind when she entered the Alms-house, nor could have got it there. Previous to her going, and to ascertain whether the sore leg was the only disease she was labouring under, I had examined her, and found her free from any other appearance of disease. From the above circumstances it can hardly be doubted, that her present affection is entirely owing to the mercurial course she has undergone; for if she had had the disease now existing before her admission, four or five months of mercurial treatment could hardly be supposed ineffectual, by those who place so much confidence in its power. If all the cohort of evils attending syphilitic

It is extremely difficult to come at an exposition of the moral habits and regularity of life of individuals; and experience shews, that however respectable they may be in any other point of view, prudence dictates and compels them to deviate from truth in those instances, even when it would be the most beneficial to their existence. The dread of being exposed; the despotism of the law to compel a physician to reveal secrets that the terror of a lingering torturing disease, ending not unfrequently in death, could alone unbosom, has been, and will be a veil too thick to be penetrated by the eyes of the physician.

There exists however cases in which truth is unveiled; and, however few, they still may lead us to the discovery of other facts of a similar nature.

If copper-coloured blotches, nodes on the bones, the falling of the hair, ulcers in the throat, buboes or swelling of the inguinal glands, ulcers on the genitals make their appearance on those that have been diseased by an abuse of mercury, without having ever had any venereal tint, not even sexual intercourse, surely we cannot range these affections in the class of syphilitic diseases.

I have seen all these affections appear spontaneously, and march on with rapidity to a dangerous extent, until proper remedies were used; and in many instances they demanded the further administration of mercury; in those affections, alone do I think, yes, I am fully convinced, the use of mercury is often indispensable.

However paradoxical it may appear, that mercury should be necessary to combat a mercurial disease, I must declare, that in many instances, fearful as I am of this herculean medicine, the life of my patient has been owing to its beneficial effects. With a little reflection, however, it will easily be conceded that the effects of a second judicious application of mercury, when the first administration of it has either been ill-timed or improperly managed, and the constitution of the patient is not too much impaired,

diseases are found and occur so frequently in other instances, what will avail the scientific distinction of syphiloid? Why should they not all be reckoned as a higher or milder grade of the same disease, if it be existing: or, would it not be safer to abandon the idea of a specific virus, to attend more particularly to the existing symptoms, and trace their malignity to the nature of the causes that have produced them?

may prove not only beneficial, but serve to remove all the deleterious effects resulting from the former, if the state of the constitution admit of it. In this there is nothing more singular, than in seeing cantharides produce or cure a strangury; and repeated doses of opium become a constant stimulus; the subsequent doses preventing the consequent debility arising from the former.

It is exceedingly probable that mercury acts as a powerful stimulus on the human constitution, and principally on the organs of generation, and extremely connected with them, the fauces; that the greater the quantity the stronger the stimulus, and as a natural consequence, the exitement and the resulting debility.

Too large quantities of mercury have generally been given; too much precipitation has been used; its continuance too long; and the cessation too sudden.

Deleterious effects of various natures are often resulting from the same cause, in the administration of other medicines. If opium, for instance, be administered in large frequently repeated doses for some time, and suspended all at once, an alarming state of debility will supervene. Small doses of wine exhilarate and give vigor to life, but the consequences of its abuse are too well known to be commented upon.

I have never found any benefit to be derived from a salivation; on the contrary, those patients that have undergone this dirty, filthy, torturing process, have to my knowledge and to their sorrow, felt the deleterious effects of it for years, and many a one for life.

Nature in all requires a given time, and it is extremely injudicious to force its operations. We can, therefore, but deprecate the continuance of mercury, until the full reparation of the loss of substance occasioned by the ravages of the disease has been entirely effected. Certainly if the virus be once neutralized, destroyed, or eliminated, a further use of mercury becomes not only unnecessary but extremely prejudicial; hence do we see all those protean forms called secondary symptoms, and many poor victims freed from a disease to fall into others a thousand times more formidable, and often incurable. The virus, if any be existing, once subdued, the healing process is like that of other sores or

deperdition of substance, the business of nature; we have only to go apace with, and friendly assist her, not by forced means, and officious interference, but as a centinel, as a guardian to prevent or remove any deleterious obstacles that might come in her way.

But from what has been said, it should not be precipitately concluded that the safest method would be to resort to mercury immediately, on the appearance of the above described symptoms. This would by no means be a correct conclusion, as in many instances where the constitution is good and the symptoms are not so aggravated as to threaten danger, many other valuable medicines may do the business, and for this reason, they have been boasted of and adopted as specifics in the cure of syphilis. I have frequently seen infants born from a mother that in her young days had been improperly and repeatedly dosed with calomel, perish, where a very trifling quantity of the same medicine would have rescued them from the hands of death. Nay, I have now under my care infants not more than twelve, fifteen, and twenty months old, who attest this truth, and are now in perfect health, although they were not expected to live, from their puny appearance at the time of their birth. It must nevertheless be remarked, that this treatment must be extremely judiciously and carefully conducted; for in this, like in all other instances of disease, medicines can kill or cure; the proper quantum and the timely dispensation constituting all the science, and establishing the skill of the physician.

So many have failed in attempting to establish the diagnosis of those affections that require the use of mercury, that I do not possess enough of vanity to persuade myself that I might hazard some remarks, without the same degree of uncertainty that has characterised the attempts of many others on this point. This however I well know, that, as mercury has occasioned thousands of evils, nothing but consummate experience can determine whether it be advisable or not; that, on the contrary, as sound experience shows that no danger can result from a prudent delay, at least until the aggravation of the symptoms have called for it, it is wise and rational to keep this masterly weapon as a *dernierre ressource*, to lash the disease out of its repair.

I have the extreme pleasure to find, that this plan has been

more generally adopted of late, than could have been expected; and I declare, upon the value that I place on my reputation as a professional man, that I have never seen any secondary symptoms appear on those whom I have attended through a disease of primary affection, without the administration of a single atom of mercury. What shall, however, be denominated primary action, is not altogether free from ambiguity; for I would not call a case of primary action that in which the infecter labours under a serious disease, aggravated by an abuse of mercury. This appellation might be confined to those sores communicated by a person free from any such a tint, and from my experience, may well be applied to those regularly proceeding sores denominated chancres, which, although the most terrific bugbears, I have always considered and found to be of the most mild venereal affections.

To those cases that I have published so long ago, and which are now for the first time confirmed by the authorities quoted in Dr. Burder's inaugural dissertation, I might have added many others of a more singular nature, and which, I believe, must have occurred to others, but were either unobserved or kept in silence.

Those cases were so familar to me that they have enabled me to quiet fears and apprehension, and to remove many unfavourable suspicions created in families. I have so often seen husbands injured most outrageously by wives whom it would haye been a sin to suspect, and wives reduced to a deplorable state by most regular and chaste husbands, that had been overloaded with mercury during our epidemics, a number of years before their connection, that I found it necessary to give them the means not only of curing, but of preventing the recurrence of the same evil.

If cases were not so often used to swell pages, I could afford a full scope of them for consideration; yet, I cannot altogether forbear to introduce one, not of long date, for the principal actors of the scene are living, though two of the attending physicians are dead.

A young man consulted me for a dulness in one of his principal organs of sense, informing me at the same time that his family and friends were strongly in favour of a course of mercury.

I represented to him that at that present time it would be extremely improper; not taking my opinion, that it would be of no

matter of service to him, into any consideration: he was shortly to be married, and I was under the necessity of informing him, that he indubitably would communicate some mercurial affection to his wife, as I had seen in several instances of the same nature; that her parents, indeed the world, would upbraid him with having given her the venereal disease, and the worst was that I was perhaps the sole physician to whom the facts were known by which he could be cleared of the imputation. My advice was rejected; he was, by the advice of two eminent physicians, put immediately under a mercurial course, without my participation, and salivated for several weeks without any alteration of his complaint for the better to this day. Hardly got over this frolic, he was married, and in a short time found that my predictions were realized.

His wife was confined to her room as if she had been really labouring under syphilis, and subjected to repeated salivations for months, without attending probably to the cruel situation, too often resulting from too warm and too precipitated embraces to which the females of the human race alone are doomed, on their change of situation to a married state.

Besides, I know married ladies of irreproachable conduct and life, and above all degree of suspicion, but extremely irrascible, whose anger, not being spent in words on account of their good sense, and the command they have over their temper, produces such a degree of acrimony upon the genital secretion, as to occasion a very suspicious, very sore disease on their husbands, if they happen in such cases to present the olive branch of reconciliation upon the pillow; I have seen ulcers, I have seen a discharge resembling gonorrhœa that lasted more than a month from this simple cause, and had all these affections been improperly treated, they would, we may suppose, have had the most serious consequences.

A respectable old gentleman, of the first standing in life, consulted me to know whether a venereal infection could be imbibed from holding a girl for some time on his lap. He had then a gonorrhœa, which I make no doubt proceeded from his wife, who, however free from imputation and clear from any disease of this kind, appeared to me, for several reasons, to be the cause of his ailment.

Hospitals are not, in my opinion, the best schools in which the effects of primary affection can be learned; those patients who are admitted there seldom coming at a first, or at the beginning of a primary infection. When I was a physician of our Dispensary, and I have continued in this station for about eight years of active attendance, I do not recollect to have seen then a single case of incipient disease to come to the house. I have constantly found that those patients who frequented the institution were labouring under multifarious affections, perhaps at first incurred by impure connection or abuse of venery, but the repeated administration, or the long continuance of mercury had produced such a degeneracy of the vital secretions, and opposed the natural course of the disease, that every case would require a particular history of its appearances to be understood. There I learned that the genitals might remain under a state of active ulceration; that phymosis, fistulous ulcers, and buboes, might exist for a long time without affecting in the least the general mass.

That the generality of physicians, indeed the whole world should have been and still are in the dark respecting the nature of venereal affections, at least as we see them now, is little to be wondered at, when so many various interests are combined against the investigation of truth, and the annihilation of the causes producing those affections. An individual may travel through France for years, and have promiscuous sexual intercourse without receiving any injury; and hardly pass a whole month in America without a wound if he engage in veneral excursions.

Heads are so full of the protean forms of this disease, and so many wonderful stories are circulated, that true facts cannot be admitted in evidence, and the success of a correct theory of the diseases of the genital organs *a venere* must be left to ——— the time when sound rational principles will govern mankind, and the shame, held by man alone in the whole creation, upon the most sublime function that he has been created for, restricted in its proper limits.

Such a time I fervently hope to see; but if I be frustrated in my expectations, I shall not incur the reproach of having neglected the opportunities of forwarding it.

Case of a wound of the common Iliac Artery. By William Gibson, M. D. Professor of Surgery in the University of Pennsylvania.

To Dr. Eberle.

Dear Sir—At your request I send you an account of the case in which I was under the necessity, some years ago, of tying up the common Iliac Artery. As no *regular* history of it has ever appeared, it may perhaps be gratifying to the profession to be acquainted with the minute detail. Truly yours,

W. Gibson.

During the riots which took place in Baltimore, in the year 1812, —— Williams, a labouring man, aged 38, while standing in the street, on the night of the 27th of July, received a wound from a musket ball. The ball entered the left side of the abdomen, passed through the intestines, opened the iliaca communis artery, and lodged in the sacrum. Being near the spot, where I had purposely stationed myself, in order to afford assistance to those who might be wounded, I removed the clothes rapidly from the wound, and thrusting into it the fore finger of my left hand, discovered that a very large artery had been torn across, and was pouring out blood in considerable quantity. The patient being of a thin and delicate habit of body, I reached without difficulty with my finger pressed into the wound, the orifice of the bleeding vessel; but whenever the patient moved, or my finger changed its position, the blood passed by, and made its way into the cavity of the abdomen. It was evident in such a case that the patient could only be saved by keeping my finger forcibly pressed upon the mouth of the vessel until an opportunity should offer of securing it by ligature. In this situation the man was carried to his home, some distance off, while I walked by his side and endeavoured to block up the vessel, which, notwithstanding every precaution, occasionally bled. By the time he reached home, his pulse was so feeble that almost every one present believed him dying. The artery, how-

ever, within the abdomen, still beat with considerable force, and I determined at once to make an effort to save him.

Still continuing my finger within the wound and pressed upon the artery, I commenced the operation (in the presence of Colonel Mitchell of the United States army, Drs. Owen, Hall, and several other medical gentlemen), by dividing the integuments and muscles of the abdomen, above and below the wound, to the extent of seven inches. The peritoneum was next cut through, the intestines turned to one side until the artery was exposed and slightly detached from the parts in its immediate vicinity. I now attempted to pass the common aneurismal needle armed with a large ligature under the artery; but, owing to the want of flexibility in the instrument and the depth of the cavity, I found it impossible to secure the vessel.* I then requested Dr. Hall to pass the ligature through the eye of a common flexible silver probe, curved to rather more than a semicircle, which being conveyed under the artery, the ligature was applied, but not without some difficulty. I now found, that I had tied the left iliaca communis artery, and the pulsation above the ligature could be distinctly perceived, although the circulation, in the upper and lower extremities, was very feeble. I waited for some minutes, to see whether the blood would flow from the lower portion of the artery, but no hemorrhage taking place, I turned my attention to the intestines, which were wounded in two convolutions. I placed a small thread upon each opening, and drew it with moderate firmness, so as to close up the wounds and prevent the effusion of fecal matter into the abdomen.† The extremity of each thread

* If I had had the simple but ingenious instrument invented by my friend Dr. Physick, twenty years ago, viz. a forceps, holding in its extremities a blunt curved needle with an eye through which the ligature is passed, I should have experienced no difficulty whatever, in taking up the artery. For an account and drawing of this instrument, see Dr. Dorsey's valuable work, the Elements of Surgery.

† I preferred including the openings of the gut with ligatures instead of sutures, knowing that I could easily cut them away if any urgent symptoms should follow their application. I was likewise induced to make the experiment from knowing that Mr. Astley Cooper, and some others, had drawn together apertures in sound portions of intestines by ligatures, after the operation for strangulated hernia, with success, and that experiments on ani-

was cut off near to the intestine, the other was brought forward and secured at the external wound. The large ligature which embraced the artery, was likewise fastened externally, one end being previously divided near the knot. The clotted blood which was found in the the neighbourhood of the wounded vessel, and in the cavity of the abdomen, in considerable quantity, was carefully removed, and upon doing this a slight hemorrhage took place from the lower portion of the common iliac. The bent probe was again carried beneath the vessel, and the ligature drawn so as to stop the bleeding. The parts were now permitted to close up, and to occupy their former situation; and the edges of the external wound were kept in contact with each other by adhesive straps, and a slight dressing. The operation was severe and protracted, and the patient reduced exceedingly low. A pupil watched him during the night, and kept the limb continually covered with warm flannel, and bladders filled with warm water applied to the foot.

2d day, July 28th. The patient passed a very restless night, owing, cheifly, to spasmodic twitchings of the whole of the left thigh and leg. His countenance, however, is better, his pulse at the wrist fuller and stronger, and the abdomen not at all swollen, or tender to the touch. The limb, from being cold and nearly insensible, is now evidently warmer, showing, that the blood has already found its way though in small quantity, to the parts below the wounded vessel.

3d day, July 29th. The patient is still better to-day. He has passed his urine and fæces freely, and has suffered less from spasms, owing probably to fifteen drops of laudanum taken every

mals had frequently been made with similar results. It is proper to mention in this place, however, that a ligature applied to a piece of intestine, in the manner described, has often been productive of the worst effects. Dr. Physick tried the experiment many years ago, but a violent colic pain which immediately supervened obliged him to cut away the threads. On the other hand, I may state, that in a patient of Dr. Martin of Baltimore, upon whom I operated about three years ago, for strangulated inguinal hernia, and in whose intestine a rent was found of considerable size above the stricture, the ligature was tied, so as to draw the edges closely together, and the ends of the thread were cut off near to the knot. No inconvenience followed the operation, and the patient recovered in the usual time.

three hours for the last twenty-four. His countenance, however, is somewhat flushed, his pulse increased in frequency, and when the belly is pressed upon, he complains of pain. The warmth of the thigh has increased, but the knee, calf of the leg, and foot are cold and comparatively insensible.

4th day, July 30th. Notwithstanding the continued use of the laudanum the patient passed a very uncomfortable night. He now complains of intense head-ach, his tongue is furred, the thirst very great, and the stomach is so much disordered, that he does not seem disposed to receive nourishment; and even the smallest portions of drink are occasionally thrown up. The urine is highly coloured, and a small stool passed this morning is dark and fœtid. The pulse is 140. The temperature of the thigh does not appear to have increased much; but the leg is warmer. He complains constantly of the sole of the foot, and says that the twitchings are excited every time he attempts to move the toes. The abdomen is more swelled to day, and to the touch is very sensible. There is a considerable discharge from beneath the dressings, which is thin and gleety, and somewhat offensive. Upon removing the dressing, I find the wound gaping, and without any mark of granulation. The matter is mixed with coagulated blood, and by pressure on the abdomen, can be freely discharged. I find the syringe very useful in getting it away. I have directed the laudanum to be suspended. The wound is dressed with simple ointment, spread on lint, and covered with a pledget. A large blister is applied to the belly.

5th day, July 31st. The patient is extremely restless and sometimes delirious. The pulse is very quick, and irregular. He has taken no nourishment for several hours. The heat of the whole limb has materially increased, but the foot is still so insensible, that I have ordered it to be rubbed with a stimulating oily liniment. The wound has not improved in appearance, the matter is more offensive to-day, and has excoriated the skin of the abdomen. The superficial dressing is continued. The blister drew well, but the swelling of the abdomen has not diminished.

6th day, August 1st. The patient has expressed himself relieved by the last dressing, and has past a good night; he is more

composed, his thirst is diminished, and his urine not so high coloured. The heat of the thigh is greater than that of the opposite side, but the foot yet remains very cold. The nervous twitchings have almost subsided. The swelling of the belly still continues; it is very prominent, tense and elastic at the umbilicus. The discharge from the wound is copious, and mixed with large clots of blood. The edges of the divided muscles of the abdomen are pale and flabby, without any appearance of granulation. The pulse is now 130, and the patient is extremely weak. The oily liniment is applied to the whole limb, and the flannel rollers are continued.*

7th day, Aug. 2d. There is very little variation in the symptoms to-day. But the discharge from the wound is not so free, and the matter is of thicker consistence. The limb appears to be well supplied with blood, and the heat of the foot is nearly equal to that of the opposite one.

8th day, Aug. 3d. On removing the dressings to-day, a small ligature which encircled one of the wounds in the intestine came away. The edges of the wound are slougby, with some appearance of adhesion at certain points. There is a good pus where the large ligatures emerge from the wound; but the discharge, for the most part, is still offensive and mixed with blood. The heat of the thigh and leg is still greater than that of the opposite side, and the patient complains of a dull pain throughout. He has a little appetite; the pulse is very frequent, and the belly acutely sensible when pressed upon.

9th day, Aug. 4th. One of the patient's friends came to me today suddenly and announced that he was dying from hemorrhage. I found him, indeed, in a dreadful situation; the blood had flowed freely from the external wound; the pulse was sunk so low, as to be scarcely perceptible at the wrist, and his breathing was very laborious. I removed the dressings, and cleaning away the coagulated blood, which had nearly blocked up the wound, I was able to reach the bottom with my finger. I could now perceive the vessel to pulsate distinctly above the upper ligature; but not a

* The rollers were applied very losely so as not to *compress* the limb, but merely to prevent its heat from being dissipated.

drop of fresh blood oozed out. I staid with him several hours, expecting the hemorrhage to recur; but there was no further bleeding during the whole of the day, or the succeeding night.

10th day, Aug. 5th. At 10 o'clock this morning there was a sudden gush of blood from the wound, but the quantity thrown out was inconsiderable. His pulse is extremely feeble, and the stomach rejects the slightest nourishment.

11th day, Aug. 6th. The patient has sunk very much since yesterday. He is extremely restless, his tongue is furred with a white matter, and his urine and fæces pass away involuntarily. There is also an evacuation of thin black matter from the bowels; a little fresh blood is occasionally discharged from the wound.

12th day, Aug. 7th. The belly is now swollen to an enormous size. The pulse is hardly perceptible at the wrist, but when the finger is introduced within the wound the pulsation above the ligature is still evident. The hemorrhage occurs at irregular intervals, but apparently very little blood is lost at a time.

13th day, Aug. 8th. The patient is now reduced to the utmost extremity, and his recovery hopeless.

15th day, Aug. 10th. He expired.

Dissection.—On opening the abdomen a few hours after death, a very large quantity of air was extricated, and a dark brown fœtid matter mixed with blood issued from the wound, in the neighbourhood of which it was extensively diffused. The intestines were glued to each other in every direction, bearing evident marks of violent preceding inflammation. A small opening was discovered in the intestine, from which the ligature had separated, but an adjoining convolution had adhered to it so closely as nearly to block up the cavity. The other ligature retained its situation, being loosely connected to the everted edges of the wounded gut, and surrounded for some distance, by coagulable lymph. The peritoneum adhered to the sides of the wound, and in several spots to the surface of the intestines. It appeared to have suffered, more or less throughout, from inflammation. No fecal matter could be found effused into the cavity of the abdomen.

Upon inspecting the vessels of the abdomen, I found that I had

placed two ligatures upon the *common iliac* artery of the left side, one about half an inch below the bifurcation of the aorta, and the other immediately above the division of the artery into the external and internal iliacs. The upper ligature was found detached from the vessel, which projected and preserved the circle of its mouth entire. Its cavity, as well as that of the aorta, for a short distance was blocked up by a recent coagulum of blood. The coats of the artery at its extremity had retained the impression of the ligature, and were of a pale blue colour throughout the margin of the circle. *No union whatever had taken place.* The extremity of the lower portion of the iliaca communis, was still embraced by the ligature, but on dividing this with the knife, and splitting the cavity of the vessel, I found that a partial adhesion only, had been produced, and there was no vestige of a coagulum. The blood had injected the cellular membrane in the vicinity of all the large vessels, and had almost separated the iliaca communis and lower part of the aorta from their connexions. The bullet was found imbedded in the upper and left side of the sacrum. Having proceeded thus far, I was interrupted by a jury of Inquest, assembled to examine the body. I had made arrangements to inject the limb, in order to ascertain the precise manner the blood had found its way to the lower extremity; but the friends of the patient would not listen to the proposal, and the times were too tumultuous to attempt to accomplish my purpose without their approbation.

REMARKS.

The operation of tying up even the *external* iliac artery was never performed, so far as can be ascertained, until a few years past, and was then executed in a case of emergency, by the celebrated Mr. Abernethy of London. The patient, however, did not recover, but died, probably from a diseased state of the artery, and from the peritoneum having been too much disturbed. Mr. Abernethy performed the operation in a second case, and with the same result. But in a third and fourth case he was completely successful, and enabled to establish the practice which has since

become general. To the late distinguished and lamented Dr. Dorsey we are indebted for its introduction in the United States. I know of no other instance, except the one I have related, in which the *common iliac* artery has been tied. Indeed under ordinary circumstances, when so large an artery is opened, the surgeon would have no opportunity of securing it by ligature, since it is probable that the patient would bleed to death, in a very short time. It will be recollected, however, that I was on the spot at the moment the wound was received, and succeeded instantaneously in compressing the bleeding orifice of the vessel, by the introduction of my finger. Without this timely assistance, I feel satisfied the patient could not have survived more than a few seconds. Perhaps there are very few cases, then, if any, where the *common iliac* artery is wounded, in which the operation can be resorted to, or if resorted to will prove successful.—But it is very important to know, that the largest artery in the body except the aorta, may be tied without cutting off permanently the supply of blood to the lower extremity, inasmuch as the operation may possibly become necessary in cases of aneurism of the external or internal iliacs. It is on this account, principally, that I have ventured to lay the above history before the public. It was certainly not to be expected that my poor patient, under his complicated wounds and suffering could survive; for the division of a common sized artery, unattended with injury of any important viscus, will oftentimes be found sufficiently difficult to cure. Here, however, not only the common iliac, was cut across, but there was a wound of the peritoneum and intestines. It is evident, from what has been stated, that the patient's death was produced by the combined operation of ulceration of the artery and of peritoneal inflammation; either of which alone, might have destroyed him. The ulceration of the artery probably arose from the injury occasioned by the ball, which bruised its coats, and impaired their vitality; and from the blood injecting the membrane around, and separating the vessel from its connexions. The peritoneal inflammation must have been brought about by the original injury, the extent of the operation, and the accumulation of blood and matter, within the cavity of the abdomen.

From the result of this case I am fully persuaded, that the common iliac artery in *aneurism* and under *favourable* circumstances, may be tied, not only without endangering the circulation of the lower extremity, but nearly with as much facility and safety as the *external iliac itself*; and if an opportunity offer of performing the operation, I shall not hesitate to embrace it.*

Two cases of Aneurism, with Observations. By Granville Sharp Pattison, Esq. Surgeon.

The opinion, that the pages of a medical journal are nearly akin to those of a wonderful magazine, is one, to which I would be very unwilling to subscribe. It may be admitted, that the study of disease, as it appears in its more general garb and character, is an exercise from which the medical practitioner will derive more useful information, than from the examination of those wonderful histories with which our medical repositories are filled. But it does not follow, as a conclusion from this admission, that the perusal of what may be termed anomalies in disease, will convey only to the mind of the reader simple wonder and astonishment. The fact is otherwise. To the intelligent physician, the record of every remarkable case teaches not only a valuable lesson in pathology, but enables the philosophic inquirer to cull from its history, facts, which may with force and justice, be brought forward in explanation of the interesting physiological phenomena of the animal

* My friend Professor Hall of Baltimore, in a note to his excellent translation of Baron Larrey's valuable work, "The Memoirs of Military Surgery," has stated *inadvertently* "that Dr. Gibson, in presence of several physicians, dilated the wound, and tied two ligatures on the aorta, above its division into the great iliacs, and the hemorrhage ceased." It is a curious circumstance, that Mr. A. Cooper of London, has since this period *actually* tied up the aorta, in the situation mentioned, but the patient lived only 40 hours, owing to the advanced stage of the aneurism, and to the blood not finding its way to the *aneurismal* limb after the operation.

economy. Again, the avocations of the most trifling practitioner of physic lead him daily to the study of general disease. It may be very true, that becoming habituated to the exhibition, an inertness and indolence of observation may be encouraged; that the actions of his mind, in relation to his profession, may become truly mechanical, and that those very interesting, but common symptoms which are attendant on the simplest affections, may altogether escape the attention of the *trading physician.* Let this be as it may. The picture from which he is to study "*every day disease*" is constantly before his eyes; if he will, he may read and improve; if he is wilfully blind we may pity, but we cannot hope to enlighten him. Disease, although various in its symptoms, runs generally in the same channels; remarkable cases are far from being common, and the physician in limited practice may be long before he is enabled from his own experience to form correct notions either of the symptoms, or characters of the rarer forms of disease. It may however be different; he may have just commenced his professional career, when his attention may be attracted by a case which his systemetic reading has not prepared him for; and all the ardour and enthusiasm which attends the young man who is just entering on his profession may be damped by the chilling influences of doubt, misgiving, uncertainty and fear.

Periodical medical publications are eminently useful in guarding against this. Their expense is moderate, and if properly conducted, they convey in a limited compass not only that which is remarkable in the experience and practice of physicians of one country, but of the world. That they may accomplish this object, they assuredly should be the records not of simple, but of remarkable experience.

Influenced by these considerations, I have been induced to publish the two following cases of aneurism. There may be drawn from their histories both pathological and physiological observations. As it is my intention to bring before the profession some observations on the action of the arteries, I shall in this paper confine myself to the detail of the facts of the cases; and conclude with a few practical remarks which naturally grow out of them.

Mr. J. M'C. the gentleman who is the subject of the first

case, was, at the period of his death, in the 47th year of his age. He was a man of superior talents and of remarkable activity, and, until six months previous to his dissolution, had enjoyed excellent and uninterrupted good health. In the autumn of the year 1816, he was attacked with a severe, and as he and his physicians thought, rheumatic pain in the lower part of his neck. It was continued, nor did all the local and general remedies used, operate towards it alleviation. The neck was again and again examined; but as nothing could be there discovered amiss, the first opinion of the medical gentlemen was retained, and the rheumatic plan of treatment persevered in until the patient's death.

Although suffering severely from the local pain, Mr. M'C. did not confine himself constantly to his house; but was actively engaged during a great part of the period of illness in arranging his affairs, which from commercial convulsions, had become embarrassed.

One evening in the month of April 1817, he retired to bed in his usual state of health, and was discovered next morning in a state of insensibility arising from apoplexy. Under this attack he remained until the evening, when he recovered his sensibility; and after conversing with his friends rationally for about an hour and a half, again relapsed into coma, which terminated his life early the following morning. I was not consulted as a medical man during Mr. M'C.'s illness, but was requested by a friend, one of the physicians who had attended him, to conduct the dissection.

The apoplexy being the most prominent feature in the case, the head was first examined. When the convolutions of the brain were exposed by the removal of the scull cap and dura mater, the cerebral veins were observed very much distended with blood. But although the dissection of the brain was conducted with the utmost care and attention, neither sanguineous nor serous effusion could be discovered in the ventricles or substance of that organ. The general and very great turgescence of the cerebral vessels was, however, quite sufficient to account for the coma.

On opening the chest, the nature of the original disease was at once exposed. There arose from above the arch of the aorta

a large tumour, which, projecting sternally, adhered firmly to the spinal aspect of the sternum. Upon separating this connection we discovered that the tumour was formed by an aneurism of the arteria innominata, and that the sternum where pressed on had become carious. The transverse vein formed by the union of the left subclavian and jugular veins, presented a very uncommon appearance. It had more the character of a ligamentous cord than of a distended vessel; and when opened it was found filled with coagulable lymph, which completely obliterated its cavity. Being curious to ascertain the cause of this, I traced it carefully downwards towards the right auricle. Upon arriving at the sternal aspect of the aneurismal tumour, the vein terminated that portion of it which crossed the tumour, having from pressure become obliterated. The tumour measured four inches in its transverse diameter, and three in its longitudinal. The depth of the sac from its spinal to its sternal surface was two inches and three quarters. From its situation it completely covered and concealed the trachea and gullet. The whole length of the arteria innominata was involved in it, and those arteries into which that vessel naturally divides arose separately, as independent branches from the spinal aspect of the aneurismal sac. Both the superior and inferior thyroidean veins were enlarged and distended with blood; they appeared to be the channels through which the venous blood from the left superior extremity and left side of the head and neck was conveyed to the pulmonic auricle.

We are naturally struck, from the consideration of this case, with the fact, that such a derangement could exist in the arterial system, and yet remain undiscovered until after the patient's death. It is a very rare occurrence even for aneurisms of the arch of the aorta to remain unsuspected. We cannot, it is true, in many instances give a positive assurance of their existence, but the palpitations of the heart, the intermissions of the pulse, and those painful indescribable pectoral sensations which are their usual attendants, leave in the mind of the intelligent practitioner generally little doubt of their presence.

Another fact in the history which strikes us as curious is, that although the aneurismal tumour was situated immediately before

the trachea and œsophagus, although it had from its enlargement obliterated the transverse vein, and from its pressure rendered the upper bone of the sternum carious, still that no symptom of its having pressed either on the aspera arteria or gullet was manifest during the life of the patient. Writers on aortic aneurisms inform us, that when these tumours are situated on the right side they produce dysphagia, when on the the left dyspnœa. Yet in this case neither of these symptoms were present. Can it be supposed that the enlargement of the tumour was directed towards the sternum by the force of the circulation? That the blood coagulating upon the anterior inner surface of the sac, and remaining fluid on the posterior, that the current of the circulation behind directed the pressure from the trachea and gullet, and threw it forward to the sternum?

The tracheal margin of the tumour projected above the first bone of the sternum; yet the physicians in attendance, men of the very first consideration, declared that no pulsation was to be discovered. I must confess that I am sceptical on this subject. That they did not discover the pulsation I can easily believe; but that it was not to be discovered by careful examination, I can hardly credit. It will be observed from the engraving that the thyroid margin of the tumour is in contact with the sternal edge of the thyroid gland; pulsation must therefore have existed above the sternum.

That the apoplexy which terminated Mr. M'C.'s life was caused from the obliteration of the transverse vein, cannot I think be doubted. The closure of the vessel had unquestionably been a slow process, and there can be no doubt but that nature had attempted to remedy the evil by increasing the capacities of the anastomosing trunks; yet although they, from becoming enlarged, were enabled to return in sufficient quantity the blood from the head, when the circulation was natural and moderate, still for the fulfilment of this office their utmost dilatation was required; they were unable, when the cerebral circulation was preternaturally increased, to accommodate themselves to the exigencies of the case; the vessels of the brain therefore became turgid, and coma was the consequence.

A valuable practical lesson is taught us from the consideration of this case. Wherever local affections are obstinate we cannot be too particular in examining both local and general symptoms, before we allow our minds to be satisfied as to the nature of the ailment. I am perfectly aware that the ignorance of the physicians as to the nature of Mr. M'C.'s complaint until it was demonstrated by dissection, had no effect on the fatal issue. But if we are desirous to raise our profession to the dignity of a Science, we should be desirous to ascertain with certainty and precision, not only those affections which are remediable, but also those which are irremediable. I will allow that, in this case, the symptoms were not proportionate to the extent of the disease; yet I hesitate not in asserting, that by careful and attentive examinations and inquiries, its nature might have been detected. Rheumatic pains, in such a situation, so local, so obstinate and so unremitting, are always to be viewed with suspicion. That rheumatic inflammation does frequently occur in this situation, cannot be doubted; but that a pain of the same character is an almost never failing attendant on aneurism, should never be forgotten. The rheumatic pain may, and probably will, be removed by medical treatment; the aneurismal never will. Let this fact be recollected, and we may be assisted in forming our prognosis in similar cases with the one we have recorded.

In the month of Nov. 1818, I was requested by Mr. Pinkerton, an intelligent surgeon in Johnstown, to visit J. Parker, a man who had been for several months under his care, and one whom he supposed had an aneurism of the subclavian or axillary artery. The history of the case which I received was to the following effect:

J. Parker had been for many years in the army, and had served under the Duke of Wellington during the whole of the Peninsular campaigns. He was necessarily much exposed both to hard duty and fatigue, but it was only towards the close of the war that his health began to suffer. The first symptoms of his complaint were pain in both shoulders, particularly in the right. This misled the hospital surgeon, who attended him, who con-

ceived that his patient had a liver complaint, and accordingly placed him under mercury. Receiving no benefit from the use of this mineral, and a reduction taking place in the army, Parker was discharged the service as an invalid. Towards the end of the year 1816 he returned to his native town, Johnstown. His health, although bad, was still not in such a state as to prevent him pursuing his original trade, that of a weaver.

There was no material change in Parker's symptoms until the spring of 1818, when the pain in the right shoulder almost disappeared, whilst that in the left became much aggravated, and changed its situation and character. Previous to this time he had complained of it as a lancinating pain above the clavicle, now it passed down under the scapula, and was of a throbbing kind. The end of May of the same year the throbbing pain having existed for some months, a pulsating tumour about the size of a hen's egg, was discovered projecting from under the inferior angle of the scapula. As our patient was at this time under the care of another practitioner, and as it unfortunately happens in small as well as large towns, that the gentlemen of the lancet are not always on the very best terms, I was unable to obtain any information to be depended upon, as to the exact point where the external tumour first appeared. In the month of July Mr. Pinkerton was first consulted on the case. The tumour from its first appearance had increased with great rapidity. It was now equal in size to the head of a new born child, and being placed behind the scapula, that bone was tilted forward, and the motion of the extremity of the left side much impaired. The pain in the situation of the tumour was constant, deep seated, and severe. The breathing difficult and attended with a short disagreeable cough. Losing strength daily, the case went on without any marked change until I saw the patient. The tumour had now acquired an immense size, and its pulsations were most violent; so violent indeed, that they resisted every attempt made to lessen its volume. The figure was emaciated, and the countenance had a very anxious expression. The difficulty of breathing was great, and he could only articulate in a low whisper. The pulse at both wrists was equal, it varied from 80 to 90 beats in the minute, it was feeble,

but regular. The radial pulsations were not synchronous with the cardiac ones.

When I questioned our patient, he assured me that there was now little pain in the tumour, and that if his breathing could only be improved he would feel himself quite well. He was most desirous that something would be done, and when I expressed to him my fears that he had nothing to hope from surgery, he appeared dissatisfied, and hinted a wish to go to Glasgow and obtain more medical advice. As there was an easy water carriage to that city, I readily agreed to the wish of my patient, and appointed a day for his visit. Anxious to satisfy Parker, and to give my brethren an opportunity of examining a most remarkable case, I had assembled in consultation all the medical elect of our city. And as my very learned and most intelligent friend, Dr. Thomson, professor of surgery in the University of Edinburgh, happened to be with me on a visit when Parker arrived, we had the benefit of his advice.

It is wonderful, yet nevertheless true, that the sentiments of the consultors on this case, were far from being unanimous: of the fourteen gentlemen who examined it, twelve were of opinion that it was either a subclavian or axillary aneurism. Dr. Thomson and myself were the only two present who gave it as an opinion that the tumour was formed by an aortic aneurism. Mr. John Barns, professor of surgery in the University of Glasgow, rediculed this idea in the strongest terms possible, and gave a most decided opinion of its being of a different nature. Although the gentlemen in consultation were divided in their sentiments as to the situation from which the tumour originated, they all agreed that it was a case which could not be remedied. The patient was accordingly sent home with some general directions as to diet, &c. &c. to await the fatal issue.

From the date of this consultation to the period of the patient's death, no change in the symptoms worthy of remark occurred. The difficulty of breathing and debility increased daily, the appetite completely failed, and the system exhausted, sunk under the disease six weeks after he left Glasgow.

Dissection.—Upon laying open the chest the seat of the aneu-

rism was demonstrated. The tumour arising from the arch of the aorta just as it describes its curve, and immediately below the point where it gives off the left subclavian artery, passed backwards, covering and completely concealing the bodies of the 2d, 3d, 4th, 5th, 6th, and 7th dorsal vertebræ. From thence its dorsal connection it stretched to the right and left. Upon the right it passed under the pulmonary artery, and reached to within two inches of the inner surfaces of the ribs of that side. On the left the lung was nearly absorbed from its enlargement; that side of the chest being almost filled by the aneurismal tumour. The small flattened portion of the lung which remained betwixt the sternal aspect of the tumour and the ribs adhered firmly to it. When this adhesion was destroyed, we remarked that that portion of the sac from which it had been separated was formed by the pleura separated from the ribs and thickened. It was opened at this point, and we were enabled by doing so to expose the dreadful ravages which the disease had committed. The bodies of all those vertebræ pressed on by the aneurism had become carious, and several of them had been almost completely destroyed. The opening by which the tumour was allowed to protrude through was formed by the destruction of nearly the whole of the bodies of the 3d, 4th, 5th, 6th, 7th, 8th, 9th, and 10th ribs; a few of the portions of these bones carious were left projecting partially across the passage which communicated betwixt the thoracic and external divisions of the sac. Of the remains of the rest part had been absorbed, and the remainder were found mixed with the coagula which filled the cavity of the sac. The walls of the cyst towards the thorax were formed by the pleura separated from its natural connections. Externally its parietes were composed of condensed cellular substances strengthened by an internal coating of firm coagulable lymph, which was about half an inch in thickness. Judging from the appearance of the coagulated blood which filled the sac, it seemed to have been nearly all in a fluid state until the death of the patient. When taken out and weighed it exceeded ten pounds in weight. The external tumour measured on its surface 18 inches in its longitudinal diameter, 14 in its transverse, and 20 in its oblique.

From the examination of Parker's body we have afforded to us a most satisfactory explanation of the symptoms which had marked the progress of the disease. The pains felt in the right and left shoulders depended undoubtedly on the pressure made on the nervi phrenici, and as the tumour extended in the first instance to the right side, we can understand the reason why the uneasiness was more complained of there in the commencement of the disease than in the opposite shoulder; so soon as the circulation made an opening through the parietes of the thorax the pressure was then in a great measure taken from the right side, and as a consequence the pain, which had been previously very violent there, almost disappeared. The pressure which the tumour made on the trachea and lungs explains the great dyspnœa from which the unfortunate patient suffered so much.

The two cases which I have related may, I believe, with justice be classed amongst the most remarkable histories to be met with in our collections of dissections. I have not entered at detail into the pathological inferences which may be deduced from them. I have merely given a few hints, leaving it to the reader to make his own observations. In my next essay on the "Action of Arteries," I shall recall the recollection of these cases, as I conceive that there may be drawn from them some valuable physiological facts, which may be brought forward in explanation of that subject.

PLATE II.

Represents a drawing taken by that very excellent painter Mr. Henderson, from J. Parker when he visited Glasgow, six weeks before his death. The great emaciation and immense size of the tumour is well shown.

The engraver having been unable to finish the plate which belongs to the first case, its appearance must be postponed until the next number.

Account of the Malignant Fever that prevailed in the United States and West Indies during part of the year 1819.

In the last number of the Recorder, a brief notice of the malignant fever that prevailed in several cities and towns in the United States was given; and a promise was made to furnish more ample details of it, in this number. This promise shall now be performed.

Of the fever, in Boston, that prevailed partially in September, we have no official documents except as to the number of deaths by it. These are stated in the annual bill of mortality, to be 32. The term used is "*malignant fever:*" one hundred and eight are said to have died of typhus, and ten of bilious fever. It is highly probable that several of the cases thus named, ought to be included under the first head. Eighteen died in the hospital at Rainsford's island, including those who were sent from Boston, and who arrived sick in vessels which were under quarantine.

The disease appeared in New York in the latter end of August, at the Old Slip and vicinity, East River, near to the same spot in which the yellow fever commenced in 1798. The first publication on the subject by the Board of Health, was on the 7th September, when they wisely recommended to the inhabitants of the infected district specified by them, to remove; and to purify the yards of their houses, their gutters, and privies, by a free use of lime. The assistants of the Board of Health, together with the city inspector and assistants were also required to examine every house and lot, within the limits described, and to cause every place capable of adding to the contamination of the air to be purified by a free use of that excellent article, just named. Vessels also were required to be removed from the wharves of the infected district, viz. included between Pearl street, the East River, Coenties Slip, and Wall street.* This decisive conduct of the

* It appeared from publications in the newspapers of the day, that the vicinity of the Old Slip abounded with the materials of putrefaction; that it

Board called forth much censure, as is common on such occasions, from the inconsiderate or selfish. The alarm was considered "premature," and certificates of attending physicians were published to show that the diseases of which the people that caused the alarm had died, was merely the common bilious remittent fever of the season. The destruction of the commerce of the city was predicted from the terror which the official declaration of the existence of the fever would cause; some persons refused to evacuate the infected spot; one man, (Boggs,) with consistent obstinacy, after being removed by order of the mayor, returned, and shut himself up in the house with his family, where he remained unknown, until discovered dead on the 19th September. One or two melancholy cases occurred of highly worthy and valuable citizens losing their lives in consequence of resolutely frequenting their counting-houses every day in the vicinity of the Old Slip; they also publicly denied the existence of any danger, and freely censured the Board for their publications. On the 8th, a detailed statement of the deaths that had been reported to them was published by the Board of Health: and it is to be regretted that some of the reports of the medical men, were of a nature to distract, and mislead the Board by their ambiguity and want of precision, had not the Board been composed of men of a decisive character, and not disposed to be led away by fine spun distinctions between "highly suspicious diseases," "of diseases having the appearance of yellow fever, but that exhibited symptoms of bilious remittent fever, and that were attended with an unusual degree of malignancy." The Board of Health made this very sensible remark on the subject of their preventive regulations. "Measures of precaution, when attended with present inconvenience, are always unpalatable, (unpopular,) and they usually become most so, when completely successful. It

was the abode of a condensed population, and the resort of a vast number of sailors; and that the houses were destitute of yards and other conveniences necessary to receive excrementitious deposits. The Slip was described as the receptacle of dead carcasses, and of every variety of animal and vegetable offal.

frequently happens that their failure is received as their best justification." They continued to make daily reports to the public of the progress of the fever, and on the 10th of September, called upon the physicians to attend to the law which requires their reporting in writing to some one of the health commissioners, all patients under their care, labouring under malignant fevers. Dr. Dewitt, the health officer of the port, died on the 11th of September, at the quarantine ground, of a stroke of the sun. On the 18th of September, the Grand Jury of the city and county of New York, presented as nuisances several places, and remarked, " that while such *prolific sources of fevers* are suffered to exist, no precautionary measures for the health of the city can be efficacious in preventing disease, or in arresting its progress." They particularly specifyed the bottom of several streets, and a lot in the north of the city; the Old Slip and vicinity; the Fly Market; Peck Slip, " and the last, yet not least," " Rosevelt Slip," which was stated to be " in a most shocking and filthy state." The Fly Market, they remarked, is built over a common sewer, which has no covering under the meat market, except the market-house floor, which is loosely laid, and on the sides of the market are a number of apertures into the sewer, which are receptacles of filth and garbage from the adjacent taverns, fruit stands, and cook shops, creating offensive and pestilential effluvia, and infecting the atmosphere.

On the 18th, much alarm prevailed, and great numbers moved from the vicinity of the Old Slip.

On the 20th, the Board recommended proper measures to be adopted to ventilate, cleanse, and purify the houses which had been vacated. They judiciously specified the good old-fashioned remedies of scrubbing and whitewashing; and advised the free use of lime in cellars and privies; the removal of all substances liable to putrefaction. The acid fumigations they very properly left to those who chose to use them.

On the 21st, the Board stated, that with the exception of three sailors, there has not been any one who has taken the disorder out of the district designated by the Board in their resolu-

tion of the 6th of September; and those who have taken the disorder there, and have sickened and died in other parts of the city, have in no instance communicated it to their nurses or attendants, or to any one else. Two of the sailors alluded to belonged to the ship La Florentine from Martinique, the particulars of which it will be useful to record.

From the publication of the Board of Health, of the 25th October, it appeared this ship La Florentine arrived in July after a passage of 20 days from St. Pierre, Martinique. The yellow fever prevailed at that place at the time of her leaving it, and one of the passengers died with it there. She performed a quarantine of 30 days, underwent all the ordinary purifications, and on the 24th August, the Health officer reported that she was free from infection, and might be allowed to come to the wharves. The Board, however, ordered her to be anchored in the stream. In the beginning of September, two of the seamen were taken ill with the yellow fever, and she was sent back to the quarantine ground. From thence she went to sea; but having met with a storm, she put back in distress, on the 25th of that month, when it was found, that since her departure her captain had died of the same disorder.*

Another seaman came from the quarantine during the last illness of the health officer, and died on board a sloop at the wharf.

The infected district was now announced to be entirely evacuated. The poorer inhabitants were removed to Staten Island, and the sick sent to the vicinity of Hurl-Gate up the East river. The entrances of the streets leading through the infected district were fenced up, and the vessels at the adjacent wharves anchored in the stream. The most active measures were also taken to correct nui-

* The case of another vessel deserves to be mentioned, as shewing the permanence of infection, under certain circumstances, and the caution necessary to be used in pronouncing a vessel safe. "The brig Eliza arrived on the 13th August, after a passage of six days from Charlestown, S. Carolina, having on board a sick passenger, who died the same day with yellow fever. She performed a quarantine of 30 days, and was three times whitewashed and otherwise purified, and on the 6th September, she was allowed to anchor in the stream, yet on the 6th October her captain died of the yellow fever, and on the 17th one of her seamen sickened with the same disease."

sances, to purify such places as seemed likely to generate or exasperate disease, and generally to do whatever might tend to preserve the health of the city. The watch was doubled round the deserted houses; and the citizens were earnestly cautioned not to enter the infected district, "an imprudence which had proved fatal to several."* The good effects of the judicious and decisive conduct of the Board, who acknowledge the able assistance derived from the mayor, Mr. Colden, were soon apparent in the speedy diminution of the number of cases reported daily by the physicians; and on the 25th of October they announced that "the danger which had lately threatened the city had disappeared." It ceased to appear after the 13th October. Their precautionary measures, they said, would have been complete "but for the imprudence of individuals. The incredulity of some, and the interest or folly of others, prompted them to visit the forbidden district. Several took the infection, and thus kept alive the disease, which would otherwise have ceased for want of subjects on which to prey." Of sixty-three cases reported, forty-three persons died of it† in the city, and at Richmond on Staten Island; a mortality, small when compared with that of other seasons in which this malady has prevailed. On the 23d Sept. a severe gale took place, and the water of the river penetrated the cellars of many houses in the infected district: had the inhabitants remained, the mortality would have been from that cause greatly increased. The Board were warmly urged to use the vile acid fumigations which were some years since cried up by the chemist Morveau of France, and Dr. Carmicheal Smith of London, as grand infallible destroyers of contagion; but they declined, and for the following sensible and substantial reasons. "They had seen in the instance of the vessels before alluded to, the difficulty of destroying infection; and admitting that the fumigations possessed all the efficacy ascribed to them, and that they might be successfully employed to purify a chamber or a house, yet it was at least doubtful whether more than 200 houses and stores, (many of the

* Cases of infection from a short visit to the Old Slip were mentioned in the last number of the Recorder.

† The whole number of deaths in the year 1819 (viz. 3176) was 80 less than in 1818.

latter filled with goods) could be so effectually purified as to render all of them safe. It was known that frost would destroy the disease; if the district remained without inhabitants till after a frost, no other purifier woold be requisite, and to invite the inhabitants to return sooner, and to depend for security upon a process which in the case of so many buildings could scarcely fail through accident or unskilfulness to be unsuccessful in some of them, was an experiment which appeared too perilous to be sanctioned by prudence." The details respecting the fever in New York are designedly minute, because it is considered important to show the local origin of the disease, and because the conduct of the Board of Health will serve as a rule for the guidance of public authorities in the event of a malignant disease breaking out in other places.

In Philadelphia the first report of a disease of a "suspicious nature" was made to the Board of Health on the 2d July. Three cases were stated to exist in the family of Mr. Reeves, who kept a tavern on the north side of Market or High-street wharf. According to the account of Mrs. Reeves, her husband was taken ill on the 28th of June, and died on the 5th of July. He had been complaining for several days before his illness; on the 28th of June, after being much heated by working on board the steam ferry boat which plyed between the wharf at his door and New Jersey, he came into the house and layed down on the floor in a draught of air. Being soon warned of the imprudent act by his wife, he retired to bed. Mrs. Reeves was taken ill the same afternoon: their daughter had been indisposed the preceding evening: all of them were removed by order of the Board of Health on the following Saturday, 3d of July, across the river to New Jersey, where Reeves died on the 5th; his wife and daughter were confined to their beds several days, but both recovered.

Isaac Geyhan, who was employed in a store on the wharf, and next door north of Reeves', had cut his ancle severely with a glass bottle, the latter end of June, and on the 1st of July he leaped into the water about two o'clock to save the life of a boy who had fallen off the wharf: after swimming about 30 feet he came out, and went into a damp alley adjoining the store, and while a

strong draught of air was blowing on him, stripped off his clothes, wrung them out, and then put them on again. He remained at the store until after sundown, when he went to his home in Brown street, Northern Liberties, and that night he was taken ill. He died the 6th of July.

Thomas, son of William Wray, who lived west of and adjoining Reeves' house, was taken ill on the 6th of July; on the 5th, which was a warm day, he had paraded with a volunteer corps to which he belonged, and dined with it at Kaighn's Point, New Jersey. He was removed by order of the Board of Health to the Schuylkill upper ferry on the 8th, and died on the 11th. A lad, James Hammon, in the same house, sickened on the 7th and died on the 9th. The remote causes of these cases of malignant fever may be rationally traced to the pestilential exhalations to which the subjects of them had been for some time exposed; derived from a collection of animal and vegetable matters* which Reeves had been accumulating for several months before his door, to manure some land he owned in New Jersey; and from a quantity of decayed vegetables which he had under his house, and had been left there by the country people, who came to market; and from a similar mass in the cellar of William Wray, and a narrow alley running parallel with his house, and to the north of it. The exciting causes of the disease in Reeves, Wray, and Geyhan, will be obvious from the facts stated above. A few days before the illness of Reeves he had superintended the removal of the mass of manure before his door on board a horse boat; the stench of which was so great as to annoy the whole neighbourhood, and among others, a member of the Board of Health, whose counting-house was to the north of Reeves. Prompt measures were taken by the Board of Health to purify the houses. More than a cart-load of an offensive collection was taken from Wray's cellar, and of putrid vegetables from under Reeves' house; and every part of both houses was well whitewashed, the families were removed and kept away several

* This consisted of oyster-shells, with a portion of the oyster left in them; garbage from the cleanings of fish in the adjoining market; decayed vegetables, and to these were added the sediments of the gutter that carried the water down Market-street, and settled on the heap.

weeks. The offensive alley north of their houses was washed by a fire engine.

A committee of the Board of Health, in their reply of 10th of July to the inquiries of Dr. Dyckman, who was sent by the Board of Health of New York to ascertain facts respecting the reports of malignant fever in Philadelphia, observe in reference to the cases on Market-street wharf, "All the sick mentioned were resident in the city, and the disease has not been traced to any vessel or any stranger arriving from abroad in the place." The fever now ceased on Market-street wharf, but several cases afterwards occured in different parts of the city, and Southern Liberties, some of which, as being evidently produced from local causes, deserve notice. Three were reported on the 13th of July, at 51 South Water street: upon examination of the house and yard, they were found to be extremely filthy: three or four cart-loads of putrefactive substances were removed. On the 2d of August another case was reported in Jones's or pewter-platter alley; the cellar was found to be extremely filthy; two cart-loads of putrefactive substances were removed therefrom. Four persons were taken ill in Swanson-street, Southwark, whose diseases were evidently occasioned by the stench of three privies in the rear of the houses; three of these died. Others in Mead and Huddell's alley were reported by the attending physicians, who also informed of the nuisances existing in the vicinity of the sick.

The most unceasing attention was paid by the Board of Health to the evacuation of some of the houses in which persons had died; the removal and washing of their bedding and clothes, and the purification of all the infected houses, and the removal of every source of pestilential exhalation in the city and liberties, together with a strict vigilance as to the introduction of sick persons or of putrefactive substances from abroad.

The whole number of deaths by "malignant fever," in the city and liberties, recorded in the bill of mortality for 1819, amount only to 13:—126 are said to have died of typhus, 49 of bilious fever, 6 of intermittent fever, and 43 of remittent fever. Some of the four last forms may fairly be included under the first head, together with some of 33 said to have died of "fever,"

simply, for all who have been familiar in the American pestilence know the proteus forms it puts on.

The disease appeared at Fell's Point, Baltimore, in the month of August, where, with the exception of Smith's wharf, and a few scattering cases, it was confined. That it originated from local causes, is the unanimous opinion of the district medical society, who in answer to an application from the joint committee of the councils of Baltimore, appointed to take into consideration that part of the mayor's communication recommending an inquiry into the causes of the late epidemic, say, "The malignant fever which prevailed at Smith's wharf, and at Fells Point in the summer of 1819, in the opinion of this society, is to be ascribed to the decomposition of vegetable matters. This opinion is supported by the following facts: The alley back of Smith's wharf has been filled up with dock-mud, shavings, and other putrescent materials. The same remarks will apply to the construction of Smith's wharf generally, and also to those parts of the Point where the fever first appeared. The immense mass of materials just adverted to, have been accumulating for many years: while the heat of the summer remained moderate, the destructive principle was only partially evolved: but the intense heat of the last summer reached the mass of perishable materials, and gave origin to the disease." The number of deaths reported in the bill of mortality by "malignant fever," is 350. But it is probable that of 73 called "*bilious*," and of 84 called "typhus" several might be included under the first head. When the decided character of the disease was ascertained, viz. on the 28th of August, the poor were removed from the infected district to the eastern extremity of the city and there encamped, under the direction of a committee of citizens.

In Charleston, South Carolina, the disease prevailed to a much greater extent than in the year 1817; in which year 270 died of it. The official statement of deaths, during the year beginning 1st of October 1818, and ending 1st Oct. 1819, return only 176 cases of deaths by yellow fever, but it is remarked that as the disease had not ceased at the time of closing the account,

those who fell victims to it on or after the first of October 1819 are omitted. The absurdity of making up a bill of mortality like a custom-house report from October to October, is so obvious, and leads to such inaccurate opinions as to the actual disease prevalent, and the number of cases of any particular disease in a given year, that the arrangement ought to be altered in future reports, and commence with January and close with the last of December. The number of deaths by bilious fever are reported to have been 19. It is probable that some of these should be added to the account of yellow fever.

At Savannah, in Georgia, it also prevailed, but almost entirely among foreigners recently arrived from Europe, among whom the mortality was great.

At Mobile the disease was highly malignant and fatal. After it had ceased, a committee was appointed by the comparatively few citizens, which the destructive fever had left, "to investigate the causes and extent of the sickness and mortality" at that place, who have published a report,* in which they prove incontestably, the local origin of the disease from the numerous and powerful sources of pestilential exhalation, that existed in the town. They particularly notice the wharves, which were filled up with rotten logs, bushes, shavings, and other vegetable matters, and covered lightly with swamp mud: Water-street filled up with the same kind of materials,—docks clogged with timber, old boats, sea-weed and other filthy substances in a state of decay, particularly under the stores standing over the water. They add, that the prevalent north wind in September and October, left the docks, and a large extent of marsh mud about them, exposed to the heat of the sun, and the water, variously obstructed, became itself stagnant and offensive.

They further notice several lots covered with stagnant water, and filled with offal substances; extreme neglect of cleanliness in the town; collections of dead animal and vegetable matter, increased by the hurricane on the 28th and 29th July; incessant rain from the 28th July to 11th September, succeeded by a hot sun for 66 days, and drought. For a while the disease seemed to

* 12 pages 12mo. S. Potter, & Co. Philadelphia.

be confined to those employed about the river and wharves, but in a few days after the 10th Sept. it spread rapidly through the whole town, and affected Creoles, inhabitants, and people of colour. About 274 persons died of it. The suburbs of the town were healthy; and no instance is known of the disease being communicated to persons out of the town by the removal and attendance upon the sick.

The facts detailed in the report referred to, while they prove to demonstration the local origin of the disease, furnish a severe but useful lesson to all emigrants in newly settled places, to remove the local causes of disease, and to prevent the occurrence of them, by attention to the mode in which their temporary accommodations are provided for.

The Mobile report also states, that at Baton-Rouge, Natchez, and perhaps generally upon the Mississippi, as high as the latter place, the same species of fever seems to have prevailed, as at Mobile, with great mortality; in the interior of the country, upon the waters of the Tombecbe and Alabama, the sickness and mortality was greater than was ever known before.

At Natchez, it was evidently caused, according to the information of a resident there, by the exhalation from numerous ponds formed in the course of the new regulations of the streets. About 250 persons died of it.

At New Orleans, upwards of three thousand are reported to have died of yellow fever during the past summer and autumn, and it was not until after the first of December, that a return to it or to the town of Natchez was deemed prudent.

In the West Indies, the fever prevailed with great mortality. The pestilential exhalations arising from the want of attention to cleanliness in the city of Havanna, aided by the uninterrupted heat of the climate, naturally account for it at that place, where late in January it still continued to prevail. But it is more difficult to assign a cause for it in the healthy island of St. Thomas, and the rocky town of St. George, Bermuda, in both of which places it was very mortal among strangers. In the vicinity of Cadiz in Spain, it is said to have been very fatal: but the particulars are not known.

An Account of the Fever which prevailed in certain parts of Baltimore, during the Summer and Autumn of 1819, *with some remarks on its Origin and Treatment.* By John Revere, M. D.

One cannot help feeling surprise on observing the very opposite opinions at which men arrive on examining the same objects, and reasoning from, apparently, the same premises. Perhaps there is no pursuit in which this remark is more frequently exemplified than in medicine. This is no doubt in a great measure attributable to the nature of the subject, which does not admit of demonstration, but depends on the collective observation of many individuals, whose judgment is apt to be influenced by accidental circumstances, and preconceived opinions. When once we have adopted any set of doctrines we are too often disposed to adhere to them with pertinacity, and to abandon them with reluctance. We are too apt to feel as if our honour was concerned in defending them, and rather to seek for arguments to confirm our present impressions, than to make honest and disinterested exertions for the developement of truth. The contradictory opinions which are held concerning some of the most important, and, one would suppose, obvious characters of yellow fever, a disease of such frequent occurrence in our country that almost every practitioner has opportunities of studying it, are striking instances of the bad effects of this disposition of mind. Perhaps there is nothing more effectual in correcting such erroneous impressions than faithful reports of diseases, and of those circumstances attending them which may be supposed to modify their character. It is under the impression, that an accurate statement of the circumstances which took place during the prevalence of yellow fever in Baltimore, in the course of the last summer and autumn, will go far towards establishing some of these controverted points, in the minds of those who are sincerely desirous of discovering the truth, that I have undertaken to give the following account. I shall depend for my success chiefly on the fidelity of my narrative.

The ground on which Baltimore is placed is peculiarly favour-

able to an investigation of the origin of this disease; it will be proper therefore to give a concise topographical description of it, to enable those who have not visited this city justly to appreciate the inferences which may be drawn, from the facts which will be detailed.

Baltimore is situated about 10 miles from the head of the Chesapeake Bay, on the north side of a creek, or inlet of the river Patapsco. The land in this vicinity is alluvial, consisting of a coarse sand or gravel on a stratum of clay. Through the centre of the city runs a small stream called Jones's Falls, flowing in a direction from north to south, which empties into the Inlet or Basin as it is commonly called. The part east of Jones's Falls is called Old Town and Fell's Point. The north and western part of Old Town is dry, gravelly, and considerably elevated; but as you go in a south and easterly direction the land becomes low and flat, and seems to have been recently formed by the wash of the river. The extremity of the land in this direction projects for a considerable distance into the harbour, and is that part called Fell's Point. This portion of the city is not only low and flat, but was originally intersected by creeks, which are now artificially filled up; so that many places which are now occupied by dwelling houses quite remote from the water, have within the memory of many persons now living, been landing places for boats. Nearly all the cellars are occasionally wet. The whole margin of the city bordering on the water is indented with wharves and docks artificially constructed. The wharves are generally faced with timber, and then filled in with logs and the various offals of a large city, with a thin stratum of gravel on the surface. In some instances chips, and shavings of wood constitute the principal material. There are many reasons for believing that these substances have for some time been in a state of putrefactive decomposition. About two years since a person was employed to drive piles for the purpose of erecting a store on Wigman's wharf. In order to do this it was necessary to remove a quantity of logs, of which he found the wharf to be principally composed; in doing this there arose such an offensive odour, that it was almost impossible for the workmen to proceed, although

it was then in the midst of winter. The exciting cause of yellow fever, whatever it may be, was found during the summer of 1819, to exist in this spot, as will be seen hereafter, in its most concentrated form. Fell's Point is the place where all ships of considerable burthen lie, the depth of water not permitting vessels of this description to go farther. This is the principal place of residence for the sailors. It should be mentioned, that the water has insinuated itself into the body of many of the wharves, and washed out the looser parts, thus excavating some of them to considerable extent; in consequence of which large surfaces are alternately wet, and laid bare by the rise and fall of the tide. Some persons were inclined to attribute very considerable agency to this circumstance in producing the disease.

West of Jones's Falls the land is generally gravelly, dry, and elevated, excepting a strip bordering on the basin, and another, adjoining this stream, called the Meadow. This last, until within a few years was a mere marsh, frequently overflowed. It is now however rendered solid by being covered with a stratum of gravel several feet thick, and in many parts is quite thickly inhabited. The water in the basin is slightly brackish, and in a calm day the tide rises and falls about one foot, and when the wind blows fresh from the south or east, it rises much higher, and vice versa.

The country bordering on the Potomac and Patapsco rivers, is generally visited, during the warm season, with sudden and violent showers of rain, attended with thunder and lightning, every few days. The following remarks on the weather are taken from a meteorological journal, kept by Mr. Lewis Brantz, and published monthly in the Federal Gazette. From the known character of this gentleman, their accuracy may be depended on. The summer of 1819 was unusually dry and sultry. The heat was extremely oppressive not only from its intensity, but its duration. The prevailing winds, from the 1st of June to the last of September, were from the south and east. During the month of June there was no steady rain, and but five showers, three of which were very light. The mean temperature of Fahrenheit's thermometer during this month was 72° 2. 38. The mean temperature during

the month of July was 75°. The general range during the day was from 78° to 96°. There were but two days in the course of this month when it stood below 78° at 2 P. M. The weather during the month of August was still more oppressive; it was for the most part clear and hot, being seldom cloudy. There were but two thunder-gusts and four light showers during this month. The mean temperature of twenty-three successive days, from the 24th of July to the 15th of August inclusive, was 80° 1.88, and on the 14th between 2 and 3 o'clock P. M. the thermometer rose to the extraordinary height of 98°, at which it remained one hour. The mean temperature of the first nine days in September was 79°, of the nine days from the 10th to the 18th, 65½°. From the 1st to the 22d of this month there was but one slight shower, but this day began cloudy with a strong breeze from the north east, which increased to a heavy gale, attended with rain. The thermometer immediately fell to 60°, and never afterwards rose above 73°, but gradually declined after this time, the nights becoming quite cold. The weather remained cloudy and rainy for the remainder of the month.

The city remained healthy until quite late in July. Even after the yellow fever had made its appearance, the physicians in the more elevated districts remarked that the summer was more healthy than usual. Contrary to what would be anticipated by most persons, this disease did not begin in the city, but prevailed, to a very considerable extent, in the heighbourhood for several weeks before a single case occurred in town. It was first discovered on the margin of the harbour, for an extent of between two and three miles without the city. The spots where it was more particularly noticed, are known by the names of Canton, Harris's creek, Cedar Point, and the Sugar-House. In the course of the month of July one physician had no less than 30 cases on these estates. These persons were affected with all the intermediate degrees of fever from a slight intermittent to well marked yellow fever, attended with bilious stools, black vomit, and hæmorrhages. The greater number were of this latter description. These persons were generally farmers. It is worthy of notice that several of them who suffered most severely had not been in the city for a

month. As this occurred in a remote district, and the attending physician thought proper to be silent on the subject lest it should excite unnecessary alarm, this remained, comparatively speaking, unknown. The latter part of July the public attention was first roused by several cases which happened about the same time, exhibiting all the distinctive characters of bilious, remitting, or yellow fever, in its most malignant form. They could all be satisfactorily traced to Smith's dock, which is west of Jones's Falls, and one of the most central and busy spots in the whole city. The persons attacked were not exclusively of any particular profession. They were merchants, whose counting-rooms were on this wharf, crews of vessels lying in this dock, &c. Within a short time ten persons were seized, who were in the habit of frequenting this wharf, nearly all of whom died with black vomit, hæmorrhages, &c. From the number and violence of the cases, and from the high rank which several of these individuals held in society, great excitement was produced among the citizens. Several of the most intelligent and experienced members of the faculty likewise expressed serious apprehensions lest this should prove the harbinger of greater trouble. It was not alone because a few cases of yellow fever had been observed, as there is seldom a summer when some scattered, but well marked cases of this disease do not appear. It was the unusual heat and dryness of the season, and the early period at which they took place, which excited the unfavourable prognostics of these gentlemen. They now occurred in July, whereas they are seldom noticed until the latter part of August. Smith's dock is very long, but has never been noticed as being particularly filthy, nor is it ever left bare to any considerable extent by the tide. The wharf is constructed in the manner before mentioned. Some of the stores have wet cellars, others planked over, with an interval of from one to two feet between the plank and the mud. This was the state of several of the stores, the tenants of which died. We think this circumstance especially worthy of being noted, because Bowley's wharf, which was placed apparently under similar circumstances, and from which many persons died in the epidemic of 1800, was now healthy. This mortality, at that time, was

attributed to the bad state of the cellars, in consequence of which in most of the stores, they were filled up with fresh earth, and paved with bricks. There was but one case which occurred on this wharf during the summer of 1819, and that seems to countenance the belief that considerable importance should be attached to this circumstance. This patient was a clerk in a store, the cellar of which was in a bad state, and has since been filled up. It is right, however, to say that this gentleman had remained for several hours, during the middle of the day, delivering wheat, in one of the most filthy docks of the city, in an open boat. Immediately after he exposed himself to a stream of cool air in an open entry, with but little clothing. Soon after this he was seized with a violent chill, which was succeeded by a fever exhibiting symptoms of yellow fever, which shortly proved mortal. The situation of the adjoining (Price and Watson's) wharf, was supposed to have considerable agency in producing the disease in this spot. This wharf is faced with timber, and for a distance of 10 or 15 feet along its whole length it is filled with mud dug from the neighbouring dock. The remainder of the wharf, which is large, is filled with shavings, dirt collected from the streets, &c. &c. The margin of the wharf next to the water being filled with dock mud, is of course more dense, and it is likewise the highest part, so that the waste water runs off towards Smith's wharf. There is a twenty feet alley between these two wharves, on which the back doors and windows of the stores on Smith's wharf open. This alley was in a very bad state. Various nuisances were complained of about this spot, and the police took such means as were deemed necessary to prevent the further extension of the disease. The principal means employed for this purpose were, scattering lime over the alley and burning tobacco before the stores. The spot, however, was now nearly deserted, which was probably the principal reason that the progress of the malady was suddenly and completely suspended. There was evidently something in the structure of the wharf itself, and not the dock, to which we must impute the production of the exciting cause of this disease, because Spear's wharf, which is directly opposite, and which is only separated by the dock, was never invaded.

An interval now of nearly a fortnight elapsed, during which no new cases were publicly noticed. The fears of the citizens were in a great measure dispelled, and there seemed a well grounded hope that the progress of this dreadful malady was effectually stopped for the season. At the end of this time it again shewed itself in a spot remote indeed from the scene of its former ravages, but with a virulence in no degree mitigated. A public report made by the Health Office at this time (17th of August) assured the inhabitants that no serious or alarming increase of the fever had taken place, and still cherished the hope that it would not prevail to any very considerable extent. The total number of deaths for the past week was, however, rather alarming, and the prevailing diseases indicated that constitution of atmosphere from which every thing was to be feared. The total number of deaths for this week was 79, of which 18 were reported to die of cholera morbus, and the same number of bilious fever. It was likewise at this time formally announced by the Board that some well marked cases of the disease had been seen at the extremity of Fell's Point, in Wolfe street. This street runs parallel to the water, and is artificially constructed. That part where the disease first discovered itself is unpaved; in fact it seems to have been almost exclusively formed of shavings without even a stratum of earth upon them. The exciting cause of yellow fever would seem to have been evolved on this spot in its most concentrated form. This is shewn by the following circumstance: Soon after the epidemic had begun to spread in this part of the town, in consequence of a very disagreeable odour arising from this mass of putrefying shavings, it was complained of as a nuisance, when the police ordered it to be covered with fresh earth. Three labourers, all of whom lived in a healthy part of the town, were employed with their carts for this purpose. In the course of a few days all these men were seized with the prevailing disease, and they all died. A gentleman who attended two of these men assured me, that in his whole life he had never witnessed two more deplorable cases of disease. It confined its ravages for a few days to the wharves situated on the extremity of Fell's Point, and the adjoining streets, Pitt and Wolfe streets. But it remained stationary for a very short period. The fever

was first observed on this spot on the 17th of August, and by the 27th it had spread to such an extent, that every reflecting person became convinced that all hope of its being extinguished before the approach of cold weather was now utterly futile. There were several circumstances which conspired to excite the most gloomy anticipations about this time, (latter part of August and beginning of September.) The weather continued dry and sultry in the extreme. The situation of the spot which it had now invaded was most favourable to the extension of the disease; which, with the loose and improvident habits of the sailors, and persons connected with them, who form a considerable class of the population of this part of the city, led to an anticipation of the most deplorable consequences. It was remarked that the disease began about the wharves, and gradually spread itself into the interior. The crews of all the vessels lying at the extremity of the Point became more or less sickly. At Wirgman's wharf one physician attended the crews of three ships, nearly all of whom were down at the same time. The police now very properly ordered all the vessels to be hauled off into the stream. By the 9th of Sept. the disease was spreading rapidly over that part of the city which is properly called the Point, and seemed every day to become more ungovernable and fatal in its character. Every one who had it in their power to find a comfortable home elsewhere, now abandoned this part of the city; and every effort which humanity could dictate, and circumstances admit, was made by that portion of the citizens who were exempted from this dreadful malady, for the comfortable accomodation of the poor, in healthy situations. The weekly bill of mortality ending Monday, Sept. the 6th, reports the total number of deaths to be 91, of which 29 were malignant; yet at a very full meeting of the faculty three days afterwards, Sept. 9th, it was solemnly and unanimously declared by that body, that excepting the cases already mentioned at Smith's wharf, they do not believe a single case had originated west of Jones's Falls. They likewise declared without a dissenting voice, that four fifths of the city was at that time more healthy than it had been at the same season for several years.

From this period during the remainder of the month this horri-

ble pestilence stalked abroad in all the plenitude of its power, spreading death in its most loathsome and appalling form, in every direction. From its dreadful attacks there was no safety but in flight. No courage, no strength, no age could withstand this resistless, though invisible enemy. The most robust frame and vigorous health, equally with the more delicate form and feeble constitution of body sunk before its deadly approach. It is scarcely possible to conceive a more melancholy or affecting spectacle than this part of Baltimore exhibited. During the night it was completely illuminated by numerous bonfires, made in every street by the inhabitants, under an impression that this was an effectual mode of purifying the atmosphere. In the day the view was still more painful. Those places which were generally the most thronged and busy were now nearly depopulated. No noise of carriages was heard. Nothing was seen to interrupt this gloom, but perhaps a miserable negro lounging about for want of employment, a physician going his irksome round of duty, or the hearse with scarcely a follower. In that part of the town to which the disease extended last, and where it was rather less universal, one could not pass the street without noticing through the open windows persons standing about the bed of their sick and dying friends; while perhaps a little further, the attention would be attracted by objects exhibiting a strong and shocking contrast, persons in whom the most heedless self-abandonment and open debauchery were displayed. Almost every individual who remained in this part of the city was affected by the disease. From the 1st to the 30th of Sept. inclusive, besides other diseases, there were 640 cases of yellow fever reported to the Board of Health, of whom 242 died.* The following facts, which are selected from a great number possessing nearly the same common character, will shew to what an extent the atmosphere of this part of the city was at one time impregnated with the specific cause of yellow fever:—The ship Ceres sailed for Liverpool on the 25th of September. Among the passengers were a gentleman, his wife and daughter; the latter, a very interesting young lady about 20

* This is not, however, near the whole number of cases which took place, as the physicians only reported those which were the most strongly marked, lest they should excite unnecessary alarm. The number of deaths is accurate.

years of age, who had lived in a very healthy spot, in the westerly part of the city, rode to Wirgman's wharf for the purpose of embarking. The ship was already under way, and the boat waiting expressly for her. She only waited to get from the carriage to the boat, and was then rowed off. This was the only time she had been at the Point during the prevalence of the fever. The third day after she sailed she was seized with the usual symptoms of yellow fever, and died with black vomit, hemorrhage, &c. There were several others who died in this ship, but they had been frequently in the unhealthy part of the town. I shall only stop now to relate one more instance, which illustrates the same principle, while it delineates in a very forcible manner, one of the most remarkable and characteristic features of the disease. A woman employed as a housekeeper in Wilk street, which was at that time considered healthy, had made a short visit in the part of the city where the epidemic prevailed in its worst form. The third morning after she complained of a slight head-ach, and as at that time every complaint excited alarm, the gentleman with whom she lived insisted on sending for a physician, which she considered entirely unnecessary, and consented to with great reluctance. When the medical gentleman arrived he found her sweeping the house, and she had been during the whole morning engaged in making beds and attending to other domestic duties. He observed that the expression of the countenance was bad, and was still more shocked to find on examination that no pulsation could be distinguished in either wrist. He immediately called the gentleman aside, and assured him the woman was dying. This appearing incredible, another physician was called in. The women died in less than three hours afterwards!!

On the 22d instant, as has been already related, a very decided change too place in the weather. There was a long and violent storm from the north east, and the weather, particularly at night, became quite cool. The first effects of this change were very unfavourable. The number of new cases and deaths suddenly increased in a very alarming degree. This continued until the 29th, when the number of new cases, &c. again declined. About this time three new cases were announced at Smith's dock, but

the disease did not extend itself again in this quarter. It was not considered safe for the inhabitants to return to their dwellings until after the 25th of October, yet a favourable change may be dated from the first of the month, as far as regarded the number of new cases; but the severity of the disease was in no degree mitigated towards its termination, but on the contrary its virulence was increased.

The symptoms by which this disease was characterized varied very essentially in different individuals; nor could this be satisfactorily accounted for from the constitution of the patient, or the circumstances under which he was placed. Sometimes the first signs were pain in the head, back, and limbs, and an inflamed appearance of the eye. At others the disease was ushered in by a severe cold fit, which would continue for several hours; this would be succeeded by a violent fever, in which the head-ach and pains in the back and limbs would be excessive, the skin hot and burning, the countenance deeply suffused with blood, and the pulse hard and bounding. The fever would often continue without any intermission, and sometimes without any perceptible remission until the fifth or seventh day, when the pulse would sink, the surface become cold, deadly nausea would take place, followed by coffee-ground vomiting, hemorrhage and death. The yellowness of the skin often came on in this stage of the disease, and was sometimes of so deep a hue as to approach a black. In other instances nearly the reverse of this would take place. In the early stages of the disease there would be slight head-ach and pain in the back, attended with great prostration of muscular strength, preternatural coldness and clamminess of the surface, and sunken pulse. In some instances, these symptoms proceeded to such an extent that the powers of life were completely prostrated, and the patient died in a few hours. In one case a sailor was walking the deck without any complaint; he suddenly fell down. When the physician, who was immediately sent for, arrived, the senses remained, and the respiration continued, but the pulsation had ceased at the wrists, the face was hippocratic, and the man died almost immediately. If the patient did not die in this stage, which was often the case, on the 2d or 3d day reaction would take place, and the

state of the system would be completely reversed. The pulse would rise, the skin became hot, and repeated venesection became necessary. In some instances there would be neither, in the complaints of the patient, or other symptoms, any thing which would lead one to suppose that any alarming morbid affection existed, yet the patient would tell with astonishing precision the hour, and almost minute when he was siezed, and such cases frequently terminated fatally. In one instance the patient was apparently in a quiet refreshing sleep, the skin cool and the pulse not seeming to indicate danger. The patient being roused and questioned, answered rationally, that he had been seized at a certain hour two days before with head-ach and slight indisposition, but that he was now free from any complaint, excepting he was rather sleepy. Yet this man was passing his fæces and urine involuntarily, and died comatose within twelve hours. In other cases a train of symptoms so entirely opposite would ensue, that one could hardly recognize the most remote resemblance in a single feature of the disease; *e. g.* a man walked out to the hospital, a distance of more than a mile, and after he was left there by his friends, insisted that he had not a complaint. But he was delirious when he arrived, and soon became so troublesome that it was necessary to apply the strait waist-coat, which it was not found prudent to remove until within a short time before his death, which happened within 36 hours after he was admitted. The bowels were generally sluggish, but by no means insensible to the operation of cathartic medicine. There were no distinct remissions and exacerbations of fever. After the first attack there was generally an uninterrupted febrile state until a complete intermission took place. This was sometimes the case at the end of 24 hours, but at others it continued for four or five days. In many instances the sensations of the patient were in a very remarkable degree disordered. The skin would feel cold to a bystander, while the patient complained of a distressing sensation of heat, and vice versa. In almost every case the patient complained of heat and pain about the scrobiculus cordis, attended with such extreme sensibility, that the slightest pressure occasioned acute pain. This preternatural sensibility sometimes extended over the whole surface of the body, so that in one in-

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stance the patient, a man, complained seriously of the pain caused by the pressure of the finger of the physician on the wrist, in feeling the pulse. In those parts which had undergone the process of vesication the soreness and pain was most exquisite. I saw a sailor on whom the common pains of the body would have made no impression, absolutely weep from the pain he endured in dressing his blister. Hemorrhages were most frequently from the mouth. The blood did not seem to be poured out from any spot, but to ooze from the whole internal surface of the mouth and gums. Bleeding sometimes took place from the nose, ears, stomach and bowels, and in one case, from the eyes. The blood was sometimes discharged in large quantities, particularly from the bowels, attended with tenesmus. Hemorrhage was always an alarming symptom, but not necessarily fatal. In one instance there was hemorrhage from the nose, ears, and stomach, preceded by black vomit, yet the patient, a boy, recovered. Black vomit took place generally on the 5th or 7th day, and was a most dangerous symptom. It was sometimes however the first symptom of the disease, as in the following case: A boy had fallen into the hold of a ship, by which both the thigh bones were fractured. The bones had united, and the boy was comparatively well. Soon after eating his breakfast, in apparent health, he was seized with deadly nausea, which terminated in black vomit; and he died on the fourth day. After the beginning of October, as has been already stated, the number of new cases and deaths essentially diminished; yet in those who were seized after this time, the disease was still more malignant and fatal than at its commencement. One gentleman assured me that of the 23 *last* cases which were under his care, 19 died in the following manner; after two or three days of smart fever, a complete intermission would take place, the patient would seem convalescent, his appetite would return, and every thing appear most flattering; when suddenly, and without any apparent reason, he would be seized with nausea, or rather a most distressing sensation of weight about the pit of the stomach, soon after which black vomit, or hemorrhage would ensue, which were the harbingers of death.

Enough has been said of the symytoms, I presume, to establish

beyond a doubt the identity of the disease, and as we are already acquainted with the situation of the spots where it prevailed, with the principal facts relating to the weather which preceded and accompanied it, and the whole progress of the disease, we are now in possession of all the circumstances on which we are to form our judgment respecting its nature and origin. In entering upon this inquiry I am sensible that I approach a delicate subject, and one that has been contested with a sharpness and personality which ought never to be allowed to enter within the pale of scientific inquiry. In my investigation of it I shall endeavour to be candid and dispassionate, and to draw only those inferences which the above facts and the known laws of the animal economy will fairly bear me out in. To resort to all the authorities which might be produced to illustrate the origin of yellow fever, is plainly beyond the scope of this paper. Indeed the necessity of such an attempt is entirely superseded by Dr. Bancroft's " Essay on the Yellow Fever." I know of no book in the profession in which any point in pathology is more satisfactorily established. His authorities are so numerous, and unquestionable, his facts so apposite and happily arranged, and his arguments so manly, yet conclusive, that I can hardly conceive how any one can peruse the book without conviction. I have undertaken to give an account of the disease as it appeared in Baltimore in the summer and autumn of 1819, and I shall confine myself to this alone.

It has been, I believe, universally agreed among physicians, that the origin of yellow fever should be imputed to some one, or all of the following causes, viz. specific contagion, the effluvia arising from the decomposition of animal substances, and marsh miasmata. Let us now inquire if the phenomena which were observed during the progress of this disease, were such as to lead us fairly to infer, that it arose from any or all of these causes.

1st, Specific contagion. Ancient medical authors were not in the habit of marking with sufficient accuracy the distinction between the origin of contagions, epidemics, and endemic diseases. This is particularly evident in the writings of Sydenham, and the early English physicians. Even Dr. Cleghorn, in his account

of the diseases of Minorca, considers intermittents as contagious as small-pox.* This arose no doubt from the peculiar circumstances under which they were placed, particularly from the total neglect of police regulations. But the evils arising from these inaccuracies, have not yet ceased. In the care which has since been taken to prevent the introduction of foreign diseases, by quarantine laws, the same want of precision has been continued. All the violent diseases of warm climates have been considered contagious, and restrictions imposed on all intercourse with such places, to the manifest injury of commerce, and frequently to the ruin of individuals.

To prevent the inconvenience of using terms without a precise meaning, I will endeavour to define the epithets, *endemic*, *epidemic*, and *contagious*, when applied to disease. I am sensible that objections may be made to these definitions. In answer to such objections, I can only say, that I have looked in vain to find these terms distinguished from each other with more philosophical precision. At any rate they will serve to mark with sufficient accuracy my meaning, when I employ them. I have taken as my guide what seems to have been Mr. Adams's general meaning in his "Observations on morbid Poisons,"† though I consider his definitions very imperfect and unsatisfactory. By *epidemic* disease, then, I understand the effects produced by a certain unknown state or constitution of the atmosphere, in consequence of which, many persons residing in certain districts, or countries, become affected about the same time, by a disease having a common character. Thus, the influenza is sometimes epidemic, affecting about the same time many countries. Dysentery and pleurisy, having certain peculiar characters, are sometimes known to prevail as epidemics; certain fevers are sometimes epidemic, as the spotted fever, which has been so fatal in some parts of this country, puerperal fever, &c. It has been remarked, that during an epidemic, other diseases are apt to approximate, or affect the same character.

An *endemic* disease may be defined the morbid effects produced

* Vide p. 121.

† Chap. 2d. p. 6 & 7.

by certain exhalations, or effluvia, or miasmata, arising from the peculiar *properties* of *some soils* when applied, under certain circumstances, to the body, and which are confined to certain districts, which may be defined with considerable precision. The most striking examples of endemic diseases, are intermittent and remittent fevers. As these diseases, particularly the first, are only known to prevail in low marshy situations, or where the soil has considerable vegetable matter and argil combined with it, or is placed on a stratum of this earth, while persons residing in the immediate neighbourhood, on dry, gravelly and elevated situations, remain healthy; we must suppose, that these noxious effects are derived from the earth. The goitre of Switzerland, the leprosy of Syria, and the Barbadoes swelled leg, may perhaps be considered endemic, although they are generally imputed to other causes.

Contagion may be defined a product, or secretion of a diseased body, which, when applied to a healthy body, is capable of producing a disease similar to itself. Small-pox, measles, pertussis, and syphilis, are familiar examples of this. From the above definitions it will be seen that a contagious disease may be epidemic: that is to say, that in certain states of the atmosphere, these diseases may be propagated with more facility, than in others. But a contagious disease cannot be endemic; for although there be no absolute absurdity in supposing, a priori, that a disease produced by certain exhalations or miasmata, should become contagious, yet, after it has once acquired that quality, it may be communicated indefinitely. There can be no doubt that the readiness with which a contagious disease may be communicated, is very essentially modified by the degree of concentration of the contagion, the susceptibility of the individual, and the peculiar constitution of the atmosphere; yet it is contrary to all our knowledge of pathology to suppose, that a disease can at one time be contagious, and at another, absolutely destitute of that quality. It will be readily admitted that a person labouring under a contagious disease, in a narrow alley, and in a small, ill ventilated apartment, would communicate it with much more certainty than in a spacious room, in an open, airy situation. But it seems highly incredible that a

disease can at one time be so contagious, that it is capable of being transported hundreds, or thousands of miles, concealed in a package of goods, a trunk of clothes, or even about the person of an individual in perfect health, while at others, it shall prevail for months, in the midst of a populous city, and be confined to a narrow circle, and not be communicated in a single instance out of that circle, though no care be taken to restrict it. In investigating the contagious quality of disease, we are apt to be misled by finding that families, and persons in the habit of frequent intercourse, are seized with the disease, and we are often inclined to impute its origin to this intercourse rather than to their having been exposed to the same exciting cause; the same impure atmosphere. On this subject, it has very properly been remarked by Dr. Haygarth, that* "observation or experiment can determine with much greater certainty *what does not*, than what does give infection." But let us proceed in our proposed inquiry.

If this disease arose from a specific contagion, then it was most probably of foreign origin, and we should expect to find it first in those spots were there is the most frequent intercourse with foreign countries. But from the history which has already been given, it will be seen that it was first discovered in the country, at least two miles from the city. Nevertheless, as this is on the margin of the harbour, and in sight of which all ships entering must pass, it is possible that some intercourse might have taken place without its being generally known. But, from the known laws of contagious diseases, we should suppose after it had been once excited, that it would extend itself from this spot, as from a center, and that the new cases might, by a little care, be traced to some intercourse with this spot. But, excepting in the low marshy situations, and clayey soils, where intermittent and remittent fevers annually prevail, the disease did not extend in this neighbourhood. It next manifested itself at Smith's wharf, a distance of between two and three miles off, and between which little or no intercourse existed. Again, several of the persons who were supposed to have received their disease at Smith's wharf, resided in elevated situations in the westerly part of the town, where they

* Vide Bancroft, p. 94.

remained during their whole sickness; and the intercourse between these persons and their families and friends was at no time interrupted. Yet none of these families became affected, nor has any one pretended that this was the case. On the contrary, the disease, instead of radiating from these different points, entirely ceased after the death or recovery of these individuals. The spot where it again shewed itself was at least a mile in a right line from where these persons resided, where it spread itself, as has already been remarked, with dreadful rapidity; but none of the inhabitants of this part of the city have ever supposed that they derived it from any other part. Fell's Point may with propriety be considered the Port of Baltimore; and although the operations of commeree were weakened, yet they were never entirely suspended. Vessels were constantly arriving and discharging their cargoes at this part of the town, from which the goods were conveyed into the healthy districts without any inconvenience. There were likewise numerous instances of persons labouring under the worst forms of the disease being removed into the healthy parts of the town, without it being pretended that they communicated the disease in a solitary instance. The Hospital is situated about one mile from the city, on a very elevated delightful spot, and, in the extent and arrangement of the building, is inferior to no institution of the kind in the United States. It generally contains from 130 to 150 patients, lunatics, and sick of the United States navy. During the whole of the disease there were from 30 to 50 patients, in every stage of yellow fever from its mildest to its most malignant form. The wards where these persons were placed communicated by entries with the rest of the house, and there was an uninterrupted intercourse kept up. There were nurses constantly in attendance employed in removing the excretions, and yet there was not a single circumstance which could lead one to suppose that the disease was contagious. Such was the conviction of its non-contagious nature, not only in the minds of the faculty, but the other citizens, that the Hospital was thronged, particularly on Sundays, by people, some of whom came to visit their

friends, and many who came merely to witness the effects of a disease which had excited so much horror. When to these facts is superadded the solemn and unanimous declaration of the faculty on the 9th of Sept. that they had not seen a single circumstance which could lead them to suppose it was contagious, I am irresistibly led to the conclusion that the disease neither originated from, nor was afterwards propagated by contagion.

Such is the disgust and horror we naturally feel on witnessing the putrefaction of animal substances, particularly human bodies, that it is not surprising that this should have been early assigned as one of the causes of pestilential diseases. A more careful examination of this subject by modern physicians, however, does not confirm this opinion.* I have never heard that any one attributed the disease of which we are now treating to this cause;

* The following quotation from Dr. Bancroft, will go very far to shew that the effluvia arising from the putrefaction of animal bodies, is not capable of producing yellow fever, or other pestilential disease. "The church yard of the Saints Innocens, at Paris, situated in one of the most populous quarters of the city, had been the depository of so many bodies, that although its area enclosed nearly two acres, yet the soil had been raised, by them, eight or ten feet higher than the level of the adjoining street, and, upon the most moderate calculation, considerably more than six hundred thousand bodies had been buried in it during the last six centuries; previous to which date it was a very ancient burial ground. In less than thirty years the last gravedigger had deposited more than ninety thousand corpses. The earth itself had become so supersaturated with human putrefaction, as to have no longer any action, or decomposing influence, upon the bodies buried therein. The public mind became at last so much alarmed by the offensive smells, that it was determined to forbid all future burials, and to remove so much of the superstratum as would reduce it to a level with the street. This work was undertaken in 1786, under the superintendence of M. Thouret, a physician of eminence in Paris, and in two years he accomplished the removal of that superstratum. The exhumation, says this gentleman, (Journal de Physique, for 1791,) were principally executed during the winter, but a considerable part of them was also carried on during the greatest heats of summer. They were begun with every possible care, and with every known precaution; but they were afterwards continued, almost for the whole period, without employing any precaution whatever. Yet no danger manifested itself in the whole course of our labours,—no accident occurred to disturb the public tranquillity. It does not appear from the fullest inquiry, that any febrile disorder was ever produced by this immense mass of corruption."

nevertheless it will be proper to say something on this point. The only considerable sources, that I know of, from which these effects could be expected, are the grave-yards and slaughter-houses. The first are all without the city, and it so happens that nearly all of the last are very remote from where the fever prevailed, and I have not been able to find an instance where the disease was supposed to have been taken in this way. These houses are generally placed in the precincts, but for the most part in situations which are quite populous. If the stench arising from them was alone sufficient to produce yellow fever, then we should suppose that the neighbouring inhabitants could seldom be free from it from April to December. A physician, who had a very extensive practice among these people for many years assured me, that he had always considered them particularly healthy.

The only supposed cause of yellow fever which it remains for us to examine, is the exhalation commonly called marsh miasmata. The deleterious effects of this agent upon the human constitution are so palpable, that although it is entirely destitute of any sensible qualities, it has been mentioned as a cause of pestilential disease from the earliest records of medicine. Though the opinion, that contagion and animal putrefaction are among the humber of the exciting causes of yellow fever, has been strongly contested, yet I believe all have admitted, that marsh miasmata is one of these causes. There is the strongest evidence of the existence, and certain properties of marsh effluvia, though they have never been obtained in a seperate form, or submitted to chemical analysis. The only known test of their existence is, their effects on the human body. They necessarily require for their evolution the three following agents, viz. decaying vegetables, or a soil consisting of vegetable remains, humidity, and a temperature above 45° of Fahrenheit's thermometer. The precise proportion of these substances, and the degree and duration of heat most favourable to this process, is not known; but it is plain that a temperature above 45° for a considerable time is necessary, and that the evolution is increased, by increasing the temperature, until you arrive at 100°. An excess or deficiency

of humidity tends to retard the process. In a living animal or plant the particles of which it is composed are not combined according to their chemical affinity, but are placed under the influence of that unknown principle, life. The laws of chemical affinity, so far as regards them, are suspended, and they are controlled by what has been aptly called* "vital affinity." But when dissolution has taken place, the laws of chemical affinity again resume their full force, which is shewn in the process of putrefaction. The form becomes changed, new combinations are formed, different gases are extricated; and this process continues until these bodies return to the elements of which they are composed, constituting, what has been called, a caput mortuum; and in this form they become the proper pabulum for other plants. As the circumstances above mentioned, favourable to the production of marsh miasmata, are precisely those most favourable to putrefaction, there seems to be good reason to believe that this exhalation is in fact one of the gaseous products of this process.

The effects arising from this exhalation or gas are found in low, marshy situations, excepting in what are called peat boggs,† and are generally proportioned to the temperature of the climate, the season of the year, and the susceptibility of the individual exposed to it. In the spring and early part of the summer, when perhaps it is extricated in less abundance, it causes intermittents; during the latter part of summer, and through the autumn, when perhaps it exists in a more concentrated form, the common autumnal, or the malignant bilious remitting fever, and usually ends in intermittents;‡ these effects being modified by the temperature and humidity of the season, &c. &c. Persons accustomed to a cold dry atmosphere are most susceptible of its influence, especially by sleeping on the ground during the night.§ There seem to be good reasons for believing that this exhalation is specifically heavier than atmospheric air, and that it does not

* Vide J. Jackson's Inaugural Thesis on the Brunonian System.

† Vide Bancroft, Appendix, No. VI.

‡ Pringle on Diseases of the Army.

§ Bancroft.

rise to any considerable height.* It seems likewise to be soluble in water, at least it seems to lose its deleterious effects in passing over its surface, or through it.† It does not affect other animals in any thing like the degree that it does man. Indeed I know of but one authority (Dr. Rush) for supposing that it affects them at all. I cannot find any one who observed this to be the case, during the prevalence of the disease concerning which we are now speaking. I inquired of Mr. Haslam, a very intelligent veterinary surgeon, who is consulted in most of the diseases of domestic animals which occur in the city, whether he had observed any thing of the kind; but he assured me that he had remarked that the season was unusually healthy.

Carbonic acid gas, and other noxious factitious airs, particularly those which sometimes escape from animal bodies in an early stage of putrefaction, manifest their injurious effects by their sudden and direct action on the organs of respiration, producing syncope or asphyxia, &c. But marsh miasmata differ essentially in their effects from all these: they are destitute of all taste and odour. It often happens that while the unsuspecting individual is gay and happy, this invidious poison insinuates itself into the inmost recesses of the body, and lays dormant for weeks without producing a disagreeable sensation. "No visible signs," says Chateauvieux, a French traveller in Italy, "marks the existence, or the approach of this pestiferous air. The sky is as pure, the verdure as fresh, the air as tranquil as in the most healthy region. The aspect of the elements is such as should inspire the most perfect confidence; and it is impossible to express the horror which one experiences on discovering that all this is deception; that he is in the midst of dangers of which no indication exists; and that with the soft air that he is breathing he may be inhaling a poison destructive to life." But this noxious exhalation is not entirely confined to low marshy grounds; it is sometimes generated in spots which are considerably elevated. Those soils which contain a considerable

* Dr. Hunter on the Diseases of the Army. Pringle, Blane, &c.

† Dr Blane's report respecting the Walcheren Fever, Medico Transactions, &c.

portion of clay, or rest on a stratum of this earth, which is nearly impenetrable to fluids, are sometimes found to produce this exhalation, even when they are considerably elevated. So frequently is argil found to abound in those situations where these miasmata are produced, that Linnæus endeavoured to prove in his Inaugural Thesis, for the degree of M. D. that intermittent fevers were always caused by this earth. This effluvia is known in Italy by the name of mal. fria. It chiefly prevails in a large tract known by the name Maremma, "which spreads along the shores of the Mediterranean Sea, from Leghorn to Terracina, and reaches inland as far as the first chain of Appenines. Its length is 192 geographical miles, and its breadth in the Agro Romano, where it is greatest, between 30 and 40." The Pontine Marshes constitute a part of this tract, but a greater part of it cannot be considered by any means marshy. The surface is waving and in some places quite high, but there are several circumstances which render the soil peculiarly favourable to the retention of humidity. The basis of the soil, we are informed, "consists principally of pure argil," or "of substances thrown out from volcanoes in a detatched state, and afterwards consolidated into stone."* On this basis is a rich mould, in which all the vegetable productions of this delightful country grow in the greatest luxuriance. As these regions have become almost depopulated in consequence of the noxious state of the atmosphere, this extensive district is almost exclusively devoted to pasturage.

This, during the existence of the Roman empire, was one of the most populous parts of Italy, where stood the villas of the wealthy and luxurious inhabitants of the neighbouring city. As it was then in a high state of cultivation, it was not considered unhealthy, excepting about a few spots, viz. Andea, Antium, and Terracina. But as the political importance of the country has declined, the number, industry, and enterprise of the inhabitants have declined with it. The large quantities of decaying vegetable matter which has been allowed to accumulate on a moist soil in a warm climate, has probably caused this pestilential state

* See a very interesting paper in the Edin. Review, vol. 28.

of the atmosphere, which is constantly extending the sphere of its influence. "It has already passed the gates of Rome, and lodged itself within the walls of the 'eternal city.' The sanctity of the papal residence has not exempted the Quirinal from this pestilence, any more than the departed majesty of the Cæsars has protected the Palatine from its influence. Yet the Quirinal is 207 feet above the level of the Tiber, and the Palatine 181."

Such is the origin, and such the most essential properties of that exhalation commonly known among physicians by the name of marsh miasmata. However they may differ on other subjects, yet, I believe, they universally acknowledge, that this exhalation is, at least sometimes, an exciting cause of yellow fever. As specific contagion, and animal putrefaction, seem entirely inadequate to account for the prevalence of this disease in Baltimore during the summer and autumn of 1819; let us next inquire if the known properties of this agent will more satisfactorily explain it.

The soil about that spot where the disease first appeared, viz. Canton, Cedar Point, and Harris's creek, is precisely that most favourable to the production of marsh miasmata. These places have always been considered sickly, and found subject to those diseases which have been described as the result of this exhalation, viz. intermittent, remittent and yellow fevers. I have been informed by the physician, who has attended the greater number of families in this neighbourhood, that every summer the two first prevail, and that a season seldom passes when he does not meet with some cases of the last.

If vegetable substances in a state of putrefaction, humidity, and heat, are ever capable of causing yellow fever, we can scarcely imagine circumstances more favourable to its production than what existed at Smith's, and Price and Watson's wharfs, which are essentially the same, being only divided by an imaginary line. Such a mass of materials as I have described this wharf to be composed of, lying entirely open to the south and east, during such a season, we should suppose could not fail of exhaling this noxious effluvium.

At Fell's Point, particularly in that district where the disease

raged with the greatest fury, all these causes existed to a still greater extent. Not only warehouses were erected on new made land filled up with these noxious materials, but whole streets of dwelling houses. This spot is annually subject to intermittent and remittent fevers. The very moment I am writing this (last of Feb. 1820), the weather having been uncommonly warm for a few days, intermittents begin to prevail. This cause then (marsh miasmata) seems entirely sufficient to explain all the phenomena which have been described, and to assign any more would be "to suppose more causes of things, than are necessary to explain their appearances." The following conclusions, therefore, seem not only ligitimate, but unavoidable.

1st, That the disease which prevailed in Baltimore, during the summer and autumn of 1819, was that known and designated by physicians, by the name of yellow fever.

2d, That it was, strictly speaking, endemic, that it neither originated in, nor was afterwards propagated by, any specific contagion, but was of domestic origin.

When I began this paper, it was my intention to have entered pretty fully, into a consideration of the treatment; because, from the testimony of those who had the best opportunity of examining the subject, and my own observation, I have been induced to believe, that what are considered the received and established doctrines on the subject, are far from being infallible. But it has insensibly been drawn out to such an extent, that this must at least be deferred for the present.

It is proper for me to say, that I am under obligations to several physicians, for many of the facts which have been stated. I would acknowledge particular obligation in this respect, to Drs. Clendenin and Murphy, who reside in the part of the town where the disease prevailed.

REVIEWS.

Observations on the Nature and Cure of Dropsies, and particularly on the presence of the coagulable part of the Blood in dropsical Urine; to which is added an Appendix, containing several cases of Angina Pectoris, with Dissections, &c. By John Blackall, M. D. &c. &c. (first American, from the third London edition; Philadelphia, published by J. Webster, 1820. 8vo. pp. 274.)

The disease which forms the subject of the excellent book before us, has been regarded, from the earliest times down to the present period, as, in the greater number of instances, an incurable one. Its pathology was, until within a very few years past, vague, obscure and unsatisfactory, and its remediate treatment, in a considerable degree empirical and unconducted by the guide of correct principles. Placed amongst the *cachexia*, and regarded, therefore, as essentially a disease of debility, or of a relaxed state of the system; the *modus medendi*, founded upon such pathological views must, of course, in very many instances have proved, not only abortive, but directly injurious. Of late, however, more correct views of the nature of this malady have been brought forward; so that it is now considered as almost universally connected with an opposite state of the system, from that by which it was formerly supposed to be attended. Although several physicians of the last century have noticed, what they denominated "*hydrops plethoricus*," yet, the almost universal febrile or inflammatory condition of the system, in dropsical affections, was not regularly and extensively inculcated, until Dr. Rush published his sentiments upon this disease. He was the first, who objecting to its location among the cachexia, has placed dropsy

with the family of frebrile diseases. Dr. Blackall's observations go far towards confirming this view of the nature of dropsy. His opinions are founded on experiments which admit of a direct and unequivocal estimation; and are therefore entitled to much attention. He has furnished us with facts, by which we are enabled to come to a more precise discrimination between the different varieties of dropsy, and consequently to the better adaptation of our remediate means, to the particular character of these varieties.

In the Introduction, the author remarks, in the first place, that all dropsies are not of the same nature, and dependent upon one and the same cause. Many of these are altogether symptomatic, and arise from a morbid state of some viscera, and seem to be connected with a mechanical obstruction of the circulation. Other cases seem to originate "from a watery state of the blood, and a feebleness of the exhalant and absorbent vessels;" whilst in others the blood has been found to exhibit the signs of inflammation. In consequence of this variety of causes, and the difficulty of ascertaining them, the treatment of this disease has hitherto been extremely uncertain. It is on this account also that we find so many remedies mentioned for its cure, which in their effects, are diametrically opposed to each other. Dr. B. thinks that, by a due attention to the properties of the urine of dropsical patients, we may be much assisted in determining the causes of the different varieties of this disease. Without doubt the urine in many cases, may serve as a diagnostic sign; but it is certain that it cannot do so in all cases, especially where the dropsy is purely symptomatic, and has its cause in some intimate affection of the organization. Several earlier writers mention, that in certain dropsies the urine has a tendency to coagulate. Vauquelin and Fourcroy show, in their analysis of human urine, "that the urine which is least gelatinous, is most coloured, has a stronger smell and more urinary matter, and is in consequence less susceptible of fermentation or putridity; whilst that which is more gelatinous is likewise less coloured and more disposed to the formation of ammonia, more speedily deposits flakes both by evaporation and spontaneous decomposition. The former of these is a sign of good health, and the produce of complete digestion; the latter

exists in weak subjects, and in cases where the digestive faculties are much injured."

Cruickshank asserts, that the serous urine is a symptom of general dropsy, and that it often differs but little from the serum of the blood. The object of the author, therefore, is "to discuss this subject in a practical manner, and to apply these observations to the treatment of dropsical diseases."

First Chapter. Dropsies distinguished by the urine; as it is coagulable by heat, or not coagulable, &c.

In this chapter the author inquires into the correctness of the assertion of Mr. Cruickshank, "that in general dropsy, the urine coagulates like diluted serum of the blood; whilst, in that species of dropsy which proceeds from unsound viscera, it is usually high-coloured, and scanty, deposits on cooling a pink-coloured sediment, and does not coagulate either by heat or the nitrous acid." The author observes very justly, that this doctrine must be received with limitation, since "the former of these appearances is often connected with visceral obstructions," and the latter appear in dropsies independent of visceral affections. The observation of Cruickshank is, notwithstanding, an important one, and deserves particular attention, in the consideration and treatment of dropsies.

The author treats of dropsies under two heads; 1st. Dropsies, in which the urine is not coagulable; 2d. Dropsies, in which the urine is coagulable in a greater or less degree.

In the 2d chapter, cases of dropsy are given in which the urine did not coagulate by heat; and was *pale, crude, and without sediment*, or sometimes with a copious sediment.

Seven cases in persons of various ages, are related in this chapter, in which the urine did not coagulate by heat, and exhibited the appearances mentioned above. The author remarks that this condition of the urine is not often met with in dropsies. In such cases digitalis did not afford the least advantage. He observes, that in general diuretic remedies are much more active in cases where the discharge of urine is small in quantity and of a thick consistence, than when it exhibits the appearances above mentioned. When the viscera are in a sound state, irritating

purges are of service. Calomel however does not answer in such cases. In dropsies where there is a habitually large quantity of pale urine discharged, diuretics, but above all, digitalis, must be avoided. Such a copious discharge of pale urine is a bad sign; the best remedies, according to the author, in such cases, are the alkalies and magnesia, with a generous diet, and the free use of fermented liquors. He observes, further, that in leucophlegmatic or chlorotic persons, the urine exhibits this pale watery and uncoagulable condition, attended sometimes with a white sediment, and that in such persons there are often œdematous swellings, evidently arising from debility, and which disappear under a course of tonic remedies.

The 3d chapter embraces " cases of ascites and hydrocephalus in which the urine was rather scanty, but in other respects appeared to differ little, or not at all from the healthy state." It is very probable, that the urine of those who are affected with collections of water in some one cavity of the body, does not for some time change its condition, unless perhaps in regard to its quantity. The author here relates a few cases, where ascites came on suddenly after long continued diarrhœa. In such cases, he advises tonics.

The 4th chapter treats of dropsies in which the urine, not coagulable by heat is scanty, and high-coloured, becomes extremely turbid on cooling, and deposits a copious sediment, more or less lateritious. " This condition of the urine occurs in such dropsies as depend on a disorder of some of the viscera." This chapter is itself subdivided into several sections. In the first section there are a number of cases related with their dissections, and in the second section general remarks are made on those cases. He here speaks particularly of the dropsy that attends the intermittent and Walcheren fevers. As regards the condition of the urine in hydrothorax, the author states, that " generally a loaded, and high-coloured urine is amongst the first symptoms of this disease." After the urine has for some time exhibited this appearance, a slight œdema begins to shew itself, with a harsh cough, and difficulty of breathing, attended with a ropy expectoration; " and often such a sense of stricture or pain on one side of

the chest as rather encourages the opinion of some inflammatory action." With regard to the causes, he is of opinion, that hepatic obstructions very often contribute greatly to the production of this disease. The costiveness and flatulency, the oppression after food, the pale colour of the fæces, sallowness of the countenance, and occasionally some degree of jaundice, are symptoms, which carry with them a strong presumption of visceral disease. "Undoubtedly many of the appearances (of hydrothorax) can only be explained on the supposition of a fluid collected in some cavity of the chest, or the cellular membrane of the lungs; and the sudden relief of the breathing by diuretics strongly confirms this opinion. But, the increasing emaciation, the sallowness, the pulse never made uniform, the visceral countenance, &c. instruct us to consider the extravasations generally as mere symptoms, although prominent ones, and the cause, to be more deeply rooted in great glandular unsoundness. The *liver* is more frequently accused than any other gland. Its size, its importance in the animal economy, the effect which a free mode of living is well known to have on it, the partial secretion of bile, and other symptoms unnecessary to be repeated, seem to prove that this accusation is often just." The author's experience did not always confirm the observation of Cruickshank, that the pink-coloured sediment is a characteristic symptom of a scirrhous liver. He mentions a case where the sediment was present; and yet the injury, instead of having been in the liver, was found to be seated in the lymphatics, at the root of the lungs. Neither did he find its absence to afford any positive conclusions on this head. He relates a dissection where the liver was found to consist of a scirrhous mass, whilst the urine was of "a remarkably pale colour, and loaded with albumen, and totally devoid of sediment of any kind." *Squills* are considered by the author, as amongst the most active medicines, in this variety of dropsy. It ought to be given in the fullest quantity which the patient can bear without sickness. The mistura ammoniaci, and spir. æth. nutrici, seem to assist its operation. "When the squill does not act entirely as could be wished, the addition of a grain or two of calomel, every night, is frequently followed by a very great flow of urine, at the same

time that the salivary glands are affected." In general diuretic remedies seem to act beneficially in cases of this kind, whilst purgatives are injurious.

5th Chapter. Of Dropsies, in which the urine is coagulable by heat. The author observes, that we do not only find serum in the urine of dropsical patients, but sometimes also, in that of persons suffering from other diseases. He found serum coagulable by heat in the urine of a person affected with scirrhous pylorus; and in the urine of another person, who had been much debilited by a bleeding from the nose.

6th Chapter. Of the anasarca, and general dropsy in which the urine is coagulable by heat. The causes of this variety of dropsy are very various, and may in some cases be readily detected, whilst in others it is done with much greater difficulty. "Of these causes is scarlatina, mercury imprudently conducted, drinking cold water when heated, and lastly, fatigue, cold, the use of spirituous liquors, visceral disease, or the improper use of tonics." In the different sections of this chapter, each of the above causes is treated separately. In the section which treats of dropsies consequent to scarlatina, there are ten cases of this kind related. The urine, in these cases, was constantly found coagulable by heat; and in a few cases, it deposited a bloody sediment. *Rosenstein* also observes, that he has seen the urine of dropsical patients, from scarlatina, mixed with blood. Burserius compares the urine of such patients to water, in which flesh had been washed. The principal, and most important remedy in such cases, says the author, is digitalis. Bleeding, however, must by no means be neglected. There are four cases related as having arisen from the use of mercury. The blood drawn in these cases, exhibited the appearance of inflammation. The urine coagulated by heat.

7th Chapter. Of the Cachexy, with cases and a dissection. The author, observes, that the word *cachexia* has not always been employed in the same sense by medical writers. The older physicians used this word to denote that state approaching to actual dropsy, "in which the œdematous swellings are slight, but the depravation of the whole habit very considerable." *Cullen* and *Sauvages* express by this term a whole class of diseases.

The true cachexy is, however, very distinct from genuine anasarca, both in its first symptoms, and in its general course.

"The cachexy is usually marked from the very first by some disorder of the abdomen. The patient is dispirited, has no appetite, and digests nothing. There is likewise, even before the swellings make any progress, a bloated, almost transparent complexion, the truest proof of the body not being nourished. Where proper food is not abstracted, this deficiency can only have for its cause either the imperfect conversion of food into chyle, or frequent losses of blood. Dr. Darwin describes the extreme of the former of these causes, when he asserts, that occasionally, the liver failing in its office of secretion, the body ceases to be nourished, and the complexion resembles the transparency of a full grown silk worm, with a yellow tint not greater than is natural to serum. He thinks these patients die from inanition and want of chyle, and even proposes transfusion of blood. A similar transparency of colour, though with more sallowness, has been compared by Mr. John Bell to modelled wax, and observed by him to originate in small repeated discharges, as for example, the menorrhagia, the hæmorrhoidal flux, the bleeding from stumps after amputation, and even the leucorrhœa. He adds that this complexion never quits the patient entirely, although he may recover from the disorder. In the present instance, both these causes seem to unite; the food is imperfectly assimilated, and the coagulable part of the blood generally, at least, if not in every instance, passes off by the urine. At what period of the disease this discharge takes place, and what share it has in producing the other symptoms, is worthy of serious inquiry. I have seen it, when the legs only just begin to swell; and lately in two cases of cachexy threatening an entire dropsy, it was to my surprise wholly wanting."

The author then relates several cases corresponding with the above description. Only one of these cases did not prove fatal; in this case, in which a considerable degree of dropsical swelling was present, opium seemed to do much good. The author thinks, that in those cases which are characterised by the above mentioned peculiar transparency and paleness of the skin, there

exists a deficiency of bile. Darwin says, that in such cases, he in vain attempted to stimulate the liver, by mercury and the preparations of iron. The author remarks, that "we cannot be surprised at this want of success, when we recollect that mercury, which corrects an inflamed or active liver, frequently adds to a feebleness of the gland."

9th. *Cases of hydrothorax in which the urine was coagulable by heat.* There are nine cases related in this chapter. In the first case, the dissection discovered "a very inflamed state of the membranes, and also of the lungs." The author thinks that gout is most generally the principal cause of hydrothorax. He says, that whenever, in these cases, the urine deposited a sediment, even though it was red, the patient felt better. In the cough, which affects arthritic constitutions in the winter season, and which resembles very much the cough observed in hydrothorax, digitalis is by no means to be used.

In the 11th chapter, two cases of hydrocephalus are related, in which the urine was coagulable by heat, or contained a bloody sediment. The first case appeared to have come on, as a consequence of scarlatina; and the second case, from the improper use of mercury in a patient of a scrophulous habit of body. The 12th chapter is occupied by a recapitulation of the preceding parts of the volume. In the remaining chapters of this book, the author enters into a more particular consideration of the symptoms and nature of dropsy, founding his opinions and observations chiefly on the facts detailed in the preceding chapters.

In the 13th chapter, observations are made on dropsies with coagulable urine, derived from the preceding cases. This chapter is subdivided into several sections. In the first, the author speaks of the "general appearances of the urine;" and remarks, that in the greater number of dropsies this excretion coagulates on the application of heat, or the addition of some nitrous acid; oxymuriate of mercury, or infusion of galls. The second section includes a consideration of the symptoms of anasarca and general dropsy, &c. This is little more than a repetition of what has been stated in the preceding chapters. That species of dropsy which follows scarlatina, is apt to come on after a mild

attack of this disease, and where the inflammation has fallen rather upon the skin than the throat; it seldom comes on as a consequence of the severer form of it, the angina maligna. "A discreet use of cold affusion has prevented the occurrence of dropsy after scarlatina." The description which is here given of the symptoms and course of dropsy, consequent to scarlatina, is true to nature. "In the last stage the dropsy often disappears; the abdomen becomes flaccid; and a superficial observer might think some great relief were at hand. But the urine is never natural; a tympany succeeds to the ascites; the strength and nervous influence daily fail; the brain appears affected; and the scene is not closed, till after the most complete emaciation has taken place." Nature in such cases sometimes relieves herself by a copious flow of diluted urine; diarrhœa and sweating rarely supply its place.

In those cases where the dropsy comes on more gradually, the disease generally depends upon a morbid condition of some of the abdominal viscera. That species of dropsy which follows the repeated use of mercury, is, according to the author's observation, very dangerous. "The anasarca during courses of mercury, when sudden and connected with cold, has nothing in it very untractable; but if it rises gradually, and from the repeated introduction of that poison into the system, it is a truly formidable disease. The blood is not only unusually cupped, but the buff has been known to form, where it has only trickled down the arm; and the occasional whiteness both of that crust and of the serum are deserving of much notice. When this distemper has proceeded to a great extent, it is hardly cured." "The mercurial hectic in syphilis, which puts, or ought to put, an instant stop to the use of that mineral, I have known, once or twice to be distinguished by a serous state of the urine, even though there has been no absolute anasarca. How far this sign prevails generally, it is very important to inquire; since we frequently want all the evidence which the nature of the subject will admit with regard to the propriety of continuing a mercurial course."

In the third section, he speaks of the symptoms of hydrothorax and hydrops pericardii. This is most frequently met with in old

and debilitated subjects. Anasarca increases slowly; a short cough, usually attends; febrile symptoms are present, and slight hurts are apt to become inflamed. Often, the patient is able to trace their symptoms to some exposure to bad weather; and a great sensibility to the effects of cold and close rooms prevails. "The urine gives a loose and slight coagulum, and is often loaded with a red sediment. In these cases particularly, gout thrown to the extremities is wont to give a great and unexpected relief." But hydrothorax also occurs in young people. In these cases symptoms of an inflammatory character are strongly marked. "Serum and lymph are thrown out instead of pus. There is even a partial suppuration of the lung; that organ becomes at length compressed and greatly diminished in bulk; and life is extinguished by this mechanical violence." This variety, the author observes, is sometimes attended by a pain or numbness and œdema of the arm on the affected side. He remarks, that of all the symptoms, which have been regarded as pathognomic of this disease, there is none to be relied upon except the sense of fluctuations observed by the patient himself. The author has known persons prefer a horizontal posture in bed, "in whom dissection, or other conclusive evidence, proved that an hydrothorax existed." As regards the fluctuation, he believes that it is more apt to be observed in the dropsy of the pericardium, than in that of the cavities of the thorax. The sensation of fluctuation felt by the patient, is seated at the lower end of the sternum on the left side.

The fourth section contains observations on the appearances of ascites and tympanites. The diagnosis of the first of these diseases is not difficult: the fluctuation immediately detects its character. Tympanites often comes on after the ascites has disappeared, and has its seat in the epigastric region. The air which, on dissection, has been found in those who have died of this disease, was in many cases inflammable.

In the sixth section he speaks of *serous diabetes*, or an excessive discharge of serous urine. In many cases the flow of urine was so copious that it might have been taken for a true diabetes. Here, however, the increased discharge of urine did not afford any

advantage in lessening the dropsical swelling. In these cases the patients become greatly emaciated, and approach rapidly, towards dissolution. Aretæus gives a good account of this disease.

14*th Chapter.*—In the first section of this chapter, the author treats of the remote causes of dropsy. The phlegmatic temperament gives a predisposition to dropsies; and it is only in this respect that this disease can be regarded as hereditary. The author then enumerates the remote causes in detail; the principal of which are innutritious diet, contaminated air, depressing passions, and hæmorrhages. In the second section the morbid appearances, which the author observed on dissection in the fatal cases mentioned in this volume, are again succinctly noticed. The uncommon thickness and distention of the lymphatics in dropsical bodies, seem to be analogous to varicose veins. The following conclusions, are then drawn from the preceding observations:—"1, That the urinary organs are often free from any appearance of unsound structure, notwithstanding the great fault in their secretion. 2, That in two mercurial cases, the kidneys were firmer than ordinary; in one of them very strikingly so, approaching to scirrhous. 3, That an unhealthy state of the liver is likewise not an uncommon morbid appearance. 4, That an inflammatory state of some serous membranes, particularly the pleura, is frequent, producing the effusion of a serous fluid, which is more opaque and lymphy, and the membrane more disfigured in proportion to the signs of general inflammation and of local pain, and the firmness and quantity of coagulum in the urine. 5, That where on the surface of the pleura pulmonalis lymph has been thrown out, true pus has sometimes been deposited between it and the lung; and purulent expectoration has been often so marked during life. 6, In some cases the cellular membrane under the skin was found to be tense, sore, of a puffy swelling passing from one part to another, as if it had been affected with an erysipelas.

15*th Chapter.* In this chapter, the author treats of its remediate management. In the first section he speaks of the use of bleeding and blistering, in the cure of many varieties of dropsy.

This part of the book before us, is extremely interesting. He says, "Stahl remarks, that hæmorrhages are cured by moderate depletion, but by the use of astringents and tonics are converted into dropsies; and our practice will be rational in dropsy itself in proportion as we keep the spirit of this observation in view. The loss of the serous part of the blood, which so remarkably distinguishes it, presents to us a symptom of a very debilitating kind; and our first consideration of the subject might naturally enough encourage us to attempt its cure by those remedies which, from their effects on occasions not apparently dissimilar, are called astringent. If, however, the doctrine of Stahl is ever true in an actual inflammatory hæmorrhage, it is certainly not strictly so with regard to this flux of serum. Whoever endeavours to restrain it by bark, steel, and similar remedies, will inevitably see reason to repent that attempt, in an increased tension and fulness, a puffy countenance, a cough, if there has been already none, and in worse cases a true peripneumony. The very symptom for which he has prescribed will likewise be aggravated. Experience more than enough, has convinced me of the truth and importance of this observation. Not indeed that practitioners can be said, generally to act in contradiction to it; for they have too much overlooked the appearance to which it relates, to have made its removal an object of their contemplation. But it is so common an error in practice to impute discharges to debility, and endeavour to check them by astringents, that it cannot be too much provided against." This coincides with what Dr. Rush has inculcated in his works relative to the treatment of this disease. Dr. B. probably never read Rush's works, or certainly he would have mentioned his sentiments upon this subject. Dr. Blackall says, "that practitioner, I am confident, will treat the disorder most easily, most successfully, most suitably to the feelings of the patient who keeps the probability of inflammation in his view; and his attempts at cure must perpetually prove abortive unless in selecting his hydragogue medicines he prefers those which are likewise calculated to reduce inflammation. But it may be necessary to go beyond this, and to pursue a treatment more directly antiphilogistic. The most powerful of these antiphlogistic agents is venesection; I have

directed it in several instances of œdematous swelling, and never had reason to regret its use. The state of the blood and the relief that followed, have usually confirmed the propriety of the operation. It is indeed sometimes the only evacuation which can be directed for cachectic patients, their stomach rejecting both laxatives and diuretics; whilst the ease with which they undergo this operation, as well as the relief they experience from it, are truly surprising." These observations are important. They are however not original with the author; for they may be found fully and ably stated in the works of our countryman Rush. Dr. B. thinks that the state of the urine may furnish a correct guide to the propriety or impropriety of blood-letting. Where a firm, copious coagulum is early formed in the urine, by the application of heat, venesection becomes a proper and important remedy.

In the second section of this chapter, the author speaks of the purgative and antimonial remedies. He does not, in general, place much reliance on the use of purgatives in this disease; "for if the disease is not carried off by these means, it must be aggravated by them; and an increased debility will follow, particularly of the digestive organs." In cases, however, where the habit is indolent, and free from gout, and the dropsy extensive without fever, or local determination, purges are mostly safe, and productive of considerable good. He prefers using those purgative salts, in the composition of which the tartaric acid enters; as the tartrate of potash, the supertartrate of potash, and the tartarized soda. These may be given in combination with infusion of senna or tincture of jalap, if a decidedly laxative effect be required. The tartrates are particularly useful where the urine deposits a copious *sedimentum lateritium*; where, on the contrary, the urine is copious and limpid they are injurious.

In the third section he speaks of the diuretic remedies. Amongst the various writers, who treat on this disease, we find much difference of opinion respecting the value of this or that article of this class of remedies. That diuretic which is warmly recommended by one, is as strenuously objected to by another. Where the urine was small in quantity, high-coloured, and deposited a copious sediment, the author found the squill very valuable. But

in cases attended with a weak digestion, and where there was much albumen in the urine, this remedy was of no service whatever. In order therefore to come at a just indication for the use of this article, the varities of this disease must be more definitely determined, by a careful examination of the urinary secretion. Where the disease is of an inflammatory character, the saline diuretics and digitalis are applicable. The latter of these remedies is particularly recommended in the dropsies which are apt to supervene after scarlatina. Where, however, the urine did not coagulate, on the application of heat or an acid, this article afforded no advantage whatever. His observations upon the article are valuable, and the result of considerable experience. The fourth section embraces the dietetic regulations to be observed in the treatment of this disease. He advises those who void a copious limpid urine to abstain from all kinds of fruits. The diet should be as simple as possible.

Tonics are always injurious in the first stage. If after the entire disappearance of the dropsical swellings the urine still contains some albumen, tonics are not to be used. In hydrothorax, we must be particularly careful in their employment.

The Appendix, which treats of angina pectoris, is also full of valuable observations; but we have already taken up so much room with this work that we are obliged to dismiss it.

As a practical treatise we consider it highly valuable. It is full of excellent observations, which are to be found no where else.

Observations on Mr. Pattison's Paper on the Operation of Lithotomy, &c.

In a paper on Lithotomy, published in the last number of the *Recorder*, it is announced to the public, that a *new fascia*, of great importance in the operation, has been *discovered*. As we propose to investigate the claims of the writer of the paper in question, to this *discovery*, it will be necessary to prove in the first place that such claims have *actually* been made. For this purpose we extract the following passages from his essay:

"The question,—*is it possible* that there can be any *undiscovered* connection of the basis of the prostate with the neighbouring parts, which can explain the reason why large wounds are more apt to be followed by urinal infiltrations, than small ones? was now forcibly suggested to my mind. If such are to be found, we have a rational and philosophical demonstration of the justness of Scarpa's reasonings. If there are none, there can then be no physical reason, why urine should be more apt to infiltrate into the cellular texture surrounding the bladder, in a large, than in a small wound. To satisfy my mind on this momentous question, the first day I was able to walk to my dissecting room I went there, and dissected the parts after *a new method*, one which enabled me to discover a *new fascia*."

In another part of the paper it is stated,—"I shall therefore in describing the anatomy of the parts concerned in the operation of lithotomy, take it for granted, that those for whom these observations are intended, are acquainted with the structure of these parts as generally demonstrated, and shall only explain particularly, this *new* fascia, which *I have named the fascia of the prostate gland*."

Again;

"In adopting the usual method for dissecting these parts, little more than what I have thus generally described can be seen. The fascia of the prostate lies so deep, that by such procedure it cannot possibly be detected. To obtain a view of this important part it is necessary after having exposed by the dissection I have described, the *lavator ani* muscle, (levator ani,) that we on the left side detach the corpus cavernosum penis, covered by its erector from the rami of the ischium and pubis; so soon as this is done, we are next to divide carefully the symphisis pubis, taking care when we do this to avoid cutting too far down. The symphisis being cut, and the abdominal muscles divided without injury of the peritoneum, obliquely upwards, in a line betwixt the umbilicus and ilial spine, we separate forcibly to the distance of about an inch and a half, the symphisis pubis. By this separation the deep-seated parts are completely exposed. Upon making a transverse division of the *lavator* ani (levator ani) a small quantity

of cellular substance is exposed, which is, together with the *lavator* ani (levator) to be carefully dissected away. When this is accomplished, the *prostate fascia* is exposed; and if we now carry the finger down betwixt its pelvic aspect and the shoulder of the bladder, and remove the loose cellular texture which separates these, we are enabled to obtain a most beautiful demonstration of its importance in relation to the operation for the stone."

"The prostate fascia, when superficially looked at, would appear to take its origin from the inner margins of the rami of the os ischium and pubis. If we, however, come to examine it more attentively, we may remark that although it has here a connexion with the bone, that here it does not terminate, but that, in fact, it is continuous *with the aponeurosis* which covers the *obturator internus muscle.* The best description perhaps which can be given of it, would be to state, that the fascia which covers the internal obturator muscle, having reached the rami of the ischium and pubis, forms there a connexion with the inner margins of these processes; and that, from this it runs down, and is at last lost by becoming inserted into the basis of the prostate and into the rectum, where lying below, and exterior to the gland. From this description the two following facts are to be observed:

1st. That the prostate fascia separates the perinæum from the cavity of the pelvis.

2d. That, from the manner in which the fascia passes from the rami of the ischium and pubis to its insertion, that a triangular space must be formed betwixt its pelvic aspect and the shoulder of the bladder; the apex of the triangle being formed by the union of the fascia with the basis of the gland, and the base by the lateral boundary of the pelvis."

"Since coming to this country, there has been a good deal of talk, on the subject of the prostate fascia, and there has originated from some source or other two reports:

1st. That the *prostate fascia* had no existence, that it was a *mere fancy.*

2d. That it was *no discovery.*

In answer to the first assertion, I would simply state, that I have demonstrated it to some of the *first* anatomists of Europe, and

that they have been *perfectly* convinced of its reality, and have believed it a *discovery*. I have dissected it, in this city, in the presence of Drs. Physick, Eberle, and M'Clellan, who have all without hesitation acknowledged its *existence*. I have since demonstrated it, before Drs. Parish and Hartshorne, who have expressed equally strongly, the conviction of its *presence*. With this confirmation of my own assertion, I would consider it idle, to reason, with those who talk about '*making fasciæ*,' or those, who deny that name, to all such membranes as do not resist the utmost efforts of the nail-armed finger, to pass through them. It may be named fascia, aponeurosis, condensed membrane, or any name the *curious* may desire; still it remains as a boundary, *betwixt pelvis and perinæum*; still it retains all that importance which I have attached to its existence."

"*One* of my friends was rather *unfortunate* in the *discovery* he *thought* he had made, that this fascia, had been described by Mr. Collies (Mr. Colles) of Dublin, as the passage in that author, in which he conceived the prostate fascia was mentioned, referred to another,—a fascia *universally* known and demonstrated by anatomists. But although in the passage alluded to, Mr. Collies (Colles) says nothing of the fascia, still I believe, *from an attentive perusal of the work*, that that anatomist has *seen* it. *He* however *only saw it*, and was neither aware of its *connexions*, its importance or its uses. If any credit is due to *me*, for calling the attention of the profession to the connexions of the *prostate fascia*, this will remain uninfluenced, either by the negative or affirmative answer to the question, *Did Mr. Collies* (Colles) *ever see it?* The fascia *he* describes, he states, is ultimately lost on the body of the bladder; were this the case with the one *I call prostate fascia*, its division along with the basis of the prostate would have no effect on urinal infiltrations. The *only* claim I will make, and in this I am confident I will be supported, *is*, that until the present, no rational explanation has been given of the manner in which the urine is effused, and consequently that no operation has been philosophically proposed to prevent it."

After these extracts it can hardly, we presume, be doubted

by any one that the writer of the "Observations on Lithotomy," has *laid claim to the discovery of a new fascia*, notwithstanding in the sequel it seems he is obliged to admit that Mr. Colles of Dublin has at least "*seen* it," but "*only saw* it." Let us in the next place turn our attention to the work of Mr. Colles, and permit him to speak for himself, and repel, if he can, the charge which has been *forcibly* brought against him. "First observe," says he, "the extent of this fascia; it is seen to line the walls of the pelvis, from the sacro-sciatic notch forward to the edge of the symphisis pubis. It descends from the ileo pectineal line to about midway in the depth of the pelvis; here it is reflected from the surface of the muscles, and *applies itself to the prostate gland* and bladder, on the body of which it is ultimately lost. At the angle of its reflexion, this fascia appears particularly strong and white, but becomes more weak and thin, as it lines the muscles and covers the bladder.

"This fascia fixes itself into the edge of each os pubis, on the side of the symphisis, and at a very little height above the lower edge of these bones. This attachment is made by a pointed production of the fascia inserting itself into the bone: and these productions of the fascia, from their form and greater thickness, having *particularly* excited the attention of anatomists, had obtained the name of *anterior ligaments of the bladder*."

"The description given of these ligaments of the bladder, you must now be convinced, were not drawn from the parts lying in situ, but as they appeared when detached. So completely does this fascia connect the bladder to the walls of the pelvis, that it is not interrupted in the interval between what were called the anterior ligaments of this viscus. For here, we see this fascia passing from the bladder, so far forwards under the symphisis pubis, as to form a small recess or pouch capable of receiving the end of the little finger. Now as this production of the fascia advances so far forwards, under the symphisis pubis, it must approach close to that which I have termed the pubic ligament. We shall find, however, that it is separated from this ligament by the interposition of some veins, which take their course in the small interval left between these two ligaments.

"This first view of the fascia, will lead you to suppose that the membranous part of the urethra, the prostate gland, and the neck of the bladder, are held closely connected to the symphisis and arch of the pubis. This opinion will be most strongly confirmed by the next plan of dissection.

"To make this in the most satisfactory manner, you must saw through both ossa innominata a little above and behind the acetabula, and cut down to the middle of the sacro-sciatic notch, still retaining the rectum and os coccygis attached to the bladder and leaving the levator ani untouched. By making this section, you have an easy access to the deepest part of the cavity, and you enjoy the benefit of examining the connexions and extent of the levator ani muscle."

"Now proceed to raise the fascia from the external surface of the levator ani. For this purpose make an incision through this membrane, from the symphisis pubis back to the sciatic notch, and about half an inch above the place of its reflexion; carefully separate the fascia from the surface of the muscle, as low down as you can."

Then follows a description of the levator ani muscle by Mr. Colles, which it is unnecessary for our purpose to insert here. This muscle being dissected, "this exposes to our view" says he, "that ligament which has been called the triangular ligament of the urethra, or the *ligamentous septum of the perinæum*. The *important purposes* which this ligament answers, require a particular study of its *structure, extent, and connexions.*

"Let us first examine it, as seen from the pelvis. This ligament then, is attached to the arch and rami of the ossa pubis, descending along these bones, for the length of an inch and a half from the symphisis, and blending itself *with the fascia*, which covers the *internal obturator muscles.* This portion of the ligament is consequently of a triangular form, the apex of which is at the arch of the pubis; the base stretching *across the perinæum*, behind the bulb of the urethra, is not rectilinear, but of a crescent form, the concavity looking towards the anus. Through an aperture in this ligament, the membranous portion of the urethra passes. This aperture is situated at the distance of one

inch below the arch of the pubis; and somewhat less than half an inch above the lower edge or base of this ligament.

"On the pelvic surface of this ligament, we cannot, without further dissection, discover the aperture for transmitting the membranous part of the urethra. In fact, this ligament does not merely present itself as a *partition* placed in the angle of the pubis, *separating the pubis from the perinæum*, and transmitting through a distinct opening, the membranous portion of the urethra. On the contrary, we remark, that this ligament is continued from the place of this aperture, backward along the sides of the membranous part of the urethra and prostate; that *it adheres very closely to the surface of this gland;* and consequently that it serves to connect these parts to the ossa pubis, that they must follow the motions of these bones. It is this *production* of the triangular ligament which some anatomists have described as a strong membranous capsule *investing the prostate.* It is this fascia *adhering firmly to the gland*, which gives the resistance so sensibly felt when we are dividing the prostate in the lateral operation of lithotomy."

"If we attempt, in conformity to the custom of anatomical writers, to describe all those continuous fasciæ, which connect the bladder and urethra to the pelvis, as productions of one and the same fascia, we might say, that the triangular ligament by its outer edges, is fixed into the rami of the pubis, and is there continuous with the ligament *lining the obturator muscles;* that the edges of the opening for receiving the membranous portion of the urethra, are produced backwards along the prostate, and having ascended as high as the arch of the pubis, it there splits into two laminæ,—one continuing its course over the *upper surface of the gland* and bladder,—the other lining the upper portion of the levator ani muscle."

"Hitherto we have, for the sake of perspicuity," continues Mr. Colles, "described this ligament as consisting of one lamina only; but that portion which is stretched across the interval between the ossa pubis, and *which separates the perinæum from the cavity of the pelvis*, will be found to consist of two laminæ, very *distinct* from each other—the *posterior* being that which is *visible*

within the pelvis, the anterior, that which we have described as being produced upon and giving a firm position to the bulb of the urethra; between these two laminæ the strong pubic ligament is situated, and between these many blood-vessels run."

A Treatise on Surgical Anatomy, by Abraham Colles, p. 185, et seq. Dublin, 1811.

After these extracts from the work of Mr. Colles, can it with propriety be asked, has *he* seen the *fascia* which separates the perinæum from the pelvis, which lines the obturator internus muscle, which is attached to the prostate gland? Can it be said that "he *only saw it, and was neither aware of its connexions, its importance or its uses?*" The reader is at liberty to draw his own inference on the subject. If he concluded that Mr. Colles was intimately and circumstantially acquainted with the fascia, its connexions, &c. what must he think of that passage in the "*Observations on Lithotomy,*" in which it is declared that the work of Mr. Colles has been *attentively perused?*

It is not, however, in the writings of Mr. Colles *only*, that information is to be obtained respecting "this important fascia." Mr. Charles Bell, in his Quarterly Reports, part the 5th, gives a plate intended to illustrate an essay by Dr. Gairdner on the anatomy of the parts concerned in the lateral operation; in the reference to which the letter L is marked as designating "the *fascia* which *surrounds* the *prostate* gland, and which afterwards *covers the inside of the levator ani, and obturator internus.*" In fact, these parts appear to be spoken of both by Mr. Colles and Mr. Bell as matters of course, as things which have long been known, and to claim which as *discoveries*, would undoubtedly seem in their eyes ridiculous in the extreme.

In relation to the uses which the writer of the "Observations on Lithotomy" supposes this fascia to serve, viz. that it is intended to prevent urinal infiltration, "which" says he, "is rendered physically impossible, so long as this is entire,"—it is not our intention at present to speak, inasmuch as we have not leisure to enter upon the investigation. We take our leave therefore of the production of this "child of science," as the writer styles himself, until a future opportunity. W.

Observations on the Epidemic of 1819, *as it prevailed in a part of the city of Baltimore; comprising an accurate history of its origin, progress, and effects, as far as they can be ascertained; to which are affixed by way of Appendix, some remarks on the Medical Treatment of the disease, as found successful in the hands of the most distinguished members of the Profession.* By David M. Reese, M. D. of Baltimore. Published by the author, 1819, 12mo. pp. 114.

It is not often that it falls to our lot to notice the professional books of our countrymen. Successful as many of them certainly have been in improving their profession, and as high a rank as some of them have taken as public teachers, yet there are few who can pretend to much eminence as authors. We are not among the number of those who consider our deficiency in this respect a reflection on the native talent of our countrymen. We must, from the very nature of things, look for some time yet to England, France, and Germany for the great mass of our finer fabrics in literature, as we shall for productions of a different character. At present eminent talents can be more productively employed in the active duties of life, than in the sedentary pursuits of the scholar. We want actors to develope, and put in operation, the hidden resources of our country, not men to remain in the retirement of their study to write books. Nevertheless we must acknowledge, that we take up those literary productions of our countrymen, which are in themselves respectable, with an interest and pleasure which we do not feel in perusing that of a foreigner, of equal excellence; and that we cannot read those of an opposite character without some sense of personal degradation.

We are therefore not disposed to be censorious, at least towards them. We are not inclined to look upon their literary efforts with a two fastidious eye. We do not expect to find in every physician who meets with curious facts, and makes useful deductions from them, an accomplished scholar. But though we incline towards the side of mercy, yet we would endeavour to be just. Though

we do not exact in medical productions, a literal conformity to all the canons of criticism and good taste, yet we cannot permit a total defiance of their rules to pass with impunity. We are willing to admit, and this we conceive to be a very liberal concession too, that the duties of an extensive practitioner in medicine are some apology for those imperfections which their writings too frequently display. But he deserves castigation, who intrudes upon the public his half-digested thoughts, in a style which discovers an utter ignorance of the simplest rules of composition, and of the plainest dictates of common sense.

The publication mentioned at the head of this article, was announced in all the newspapers of Baltimore, almost before the pestilence, which so lately desolated that city, could be distinctly said to have ceased. The effect produced, and no doubt intended, by this measure was, to forestall the subject, to deter others from a similar undertaking. As the occasion was one of very general interest; as the circumstances which took place during this epidemic, had been understood to have thrown a strong light on some of the most interesting and important features of the disease; and especially as one of its characters, in every point of view of the greatest moment to society, and which has divided the opinions of many of the ablest members of the faculty, was believed to be elucidated almost to demonstration; the public had a right to expect, that no one would have made himself so conspicuous, unless he felt conscious of possessing the talents, learning, and experience, which would have enabled him to redeem the pledge which he had been so forward in bestowing. How he has redeemed this pledge it is now our duty to inquire.

The volume, by the kind assistance of letters of city officers, mayor's proclamations, &c. &c. is drawn out to 114 12mo. pages, and is included under the following heads, viz. General remarks,—On the causes of the Epidemic,—The progress of the Epidemic,—Provision for the poor,—Contagion, and Quarantine Regulations.

It is not often that we trouble ourselves, even with reading dedications, as we have remarked, that they are generally the parts of books which do least honour, either to the heads or hearts of

their authors. Yet, as this is a sort of trapping, which policy seems to inculcate, and custom to sanction, we should not have noticed it, however servile the style, or hyperbolical the panegyric, but for a peculiarity which seemed worthy of our attention. It is dedicated to no less than 13 gentlemen, by name, viz. the Mayor, the Commissioners of the Poor, and the Board of Health: persons, we have no doubt, of great private respectability and *worth;* and who, we have the best reason to believe, conscientiously performed their duty on this sad occasion; but whose pursuits are such as cannot be supposed to render them very competent judges, and therefore proper patrons of literary merit. Besides, from the number of the persons, &c. we confess that it has to us something of an empirical, advertising aspect, which every member of a liberal profession should studiously avoid.

The style in which these "Observations" are written may be classed among the happiest specimens of "pompous bombast," to borrow an expression of our author, which our newspaper essays, or fourth of July orations can produce.

——"It's a fine sample, on the whole,
Of rhetoric, which the learn'd call rigmarole."

Our author is never contented with simple thoughts in a plain every-day dress, but seems to look down upon them with a sort of aristocratic contempt. He is constantly seeking for high sounding epithets, and sublime expressions, without troubling himself much about the sense. He is so ambitious of ornament, that his costume is not only gaudy, and in the extreme of fashion, but is constantly carried to the extent of caricature.

To shew that these charges are not groundless, we will now present the reader, indiscriminately as we open the book, some specimens of the style in which it is written. In the preface, when the Dr. is deprecating the attack of the critic, he observes, "It will be perused by the eye of jealousy to discover its defects. The teeth of malice will grind each page, and mark its *gritty constituents.* The hand of contemptuous envy will hold the ploughshare of criticism, while it is driven with violence over its surface, turning up in its passage the numerous irregularities which deface its appearance." p. 11. "Unaccustomed to the cultiva-

tion of *hypothetical speculation*, I feel as though entering upon strange ground." p. 17. "Opposed to the *blind pursuit* of *theory*, which *some profess* to observe." p. 17. "Certain it is, that there are *physical causes* for every *physical effect*." p. 17. We regret that we have only time to make the following extracts, although the pages of our author are filled with flights, which indicate an equally vigorous wing. "Yes! The spirit of Rush looks down with grief, to see science prostrated, and truth sacrificed at the shrine of ignorance, and superstition. His name and merits are dishonoured by his successors, and even by those who were his contemporaries; for he challenged the opposition of a congregated world," &c. p. 79. Speaking of the quarantine laws, he observes, "The injured community call for the administration of equity and justice; the genius of Liberty frowns with indignation on such perversion of her rights, and the fair daughters of Columbia lament the *inhumanity* which continues a long protracted separation from their dearest relatives. Learning droops in despondency, and philosophy weeps in silence at such *prostration* of her *corollaries*." p. 87.

We think the Baltimore city officers should feel very much obliged to the Dr. for his kind patronizing conduct, and for the pains which he has taken to call them all by name. All are emphatically honoured in this way, from Mr. *Edward Johnson* the Mayor, to "*Joseph Legard*, and *Noah Fowler*, two *active men appointed* to carry *circulars* daily to every physician," "a duty which, though an *arduous* one, was faithfully performed by them, and for which they merited, and received much credit." p. 32.

If the following quotation had related to a mere abstract point of polemic divinity, we should have passed it over without troubling our readers. But when applied to physics it is a doctrine, pregnant with practical mischief. The Supreme Being has for the most part placed our destiny in our own hands. He has endowed us with the power of discerning the causes of most of the moral and physical evils to which we are exposed, and has kindly placed within our reach the means of avoiding them. To make a right use of these powers is the most acceptable homage which we can render him, and the best means of securing our own happiness.

There were circumstances which rendered this visitation peculiarly afflictive to our sister city. The whole country was suffering most severely from the deranged state of its pecuniary concerns; but Baltimore was the focus where its worst effects were felt. There wickedness had so linked herself with misfortune, that it was almost impossible to separate them. Affairs had gone to such an extent that the very foundations of society seemed to be unsettled, and confidence between man and man entirely lost. At this moment, when all commercial spirit and enterprise were completely prostrate, and bankruptcy staring every one in the face, this fatal malady made its appearance, which seemed all that was wanting to form the climax of their misfortunes. The immediate consequence was, that many of the citizens fled to the country; the usual haunts of business were deserted; and by the municipal regulations of other cities, all intercourse was cut off with the rest of our common country. At the time when all these calamities had arrived at their maximum, the clergy of the different denominations of christians, with great propriety, recommended to the mayor that a day should formally be set apart for fasting, humiliation, and prayer, and the 23d of September was fixed for this purpose. In a time of great public distress, when the mind is open to reproof, and the heart peculiarly alive to good impressions, it is not only a pious, but wise institution of our ancestors to set apart from the common duties and avocations of life, a period which shall be devoted to self-examination and a contemplation of the relations in which we stand to our neighbour, and our God. Such reflections are wholesome exercises for the mind, and are undoubtedly powerful auxiliares in the cause of religion and virtue. Nevertheless this is no good reason why we should not depend upon our physical efforts to ward off our physical evils. But we beleive that the most of our devout readers will hardly be prepared for the extraordinary consequences which Dr. R. attributes to this appropriate religious ceremony.

After remarking that the progress of the malady seemed to be arrested soon after this period, and denouncing those who have any doubts of the correctness of his opinions as "cold-hearted infidels," "haughty sceptics," and "destitute of hearts which have

been warmed by the operations divine grace," he observes—"I would not be understood to say that I impute altogether the favourable change that took place at this period to this religious act, &c.—but I am decidedly of opinion, and I conceive that opinion to be defensible, that we ought to impute in a very great degree the exemption of the city, properly so called, to the immediate agency of Providence; and that this merciful interposition would *not* have been *made*, had it not been for the *prayers* of our pious fellow citizens, is an hypothesis, by no means enthusiastic or superstitious."* p. 47. We were amused after reading the above remarks to meet with the following passage, in which is again verified the almost thread-bare apophthegm of the mote and beam. "The act of non-intercourse with Baltimore in the year 1819, will be an eternal blot upon the pages of their history, and future generations will laugh at their idle fears, and groundless apprehensions, and place *Philadelphian* philosophers, with all their *self-consequence*, on a level with those whose *peace* has been *paralyzed* by apparitions, witches or ghosts, in the ages of former *superstition.*" p. 79.

There is much idle railing and impotent malice displayed in speaking of Philadelphia. We are far from being disposed to defend her conduct to her neighbour, on this sad occasion. Her cup of bitterness was full enough, without our trying to increase the draught; and there was something ungenerous and unmanly, to take this mean advantage of a rival, who on a similar *occasion* had acted towards us with so much magnanimity. We were not surprised at the stand taken by New York. Although the other states must bow to her supremacy in commercial enterprise and activity, yet she abounds too much in newspaper philosophers. Besides, it was known that her most *distinguished* physician, who considered himself as having engrossed all the useful in-

* We think it proper to mention one circumstance which seems still more to invalidate the soundness of his learning on this subject. In his book the mayor's proclamation for a fast, is dated Sept. 29th, whereas the day appointed for this religious ceremony, was Sept. 23d. Now from this period to the first of October, there was an immense increase in the number of new cases and deaths; during this time there was essentially more than at any other time during the epidemic.

formation in the city relating to this disease,* was pledged to employ all his influence in sounding the alarm, and exciting the terrors of his fellow citizens, by the supposed contagious nature of this disease. Under these circumstances then it belonged to Philadelphia, as the acknowledged centre of medical information, and whose decisions are considered almost oracular by her numerous disciples; I say it belonged to Philadelphia, on this occasion to give a proper direction to public opinion. But in the republic of letters, we should recognize no distinction but what arises from intellectual superiority; much less should we give countenance to any pitiful jealousies between neighbouring cities.

But these are not all, nor by any means the most serious charges which we feel ourselves bound to bring against Dr. R. We could have forgiven the glaring imperfections of his style, his denunciations of those who are inclined to believe that the age of miracles has ceased, and above all, we could have pardoned his abuse of our good city, (for we acknowledge in our heart that we think she richly deserved it,) if we had found an accurate and well digested account of the epidemic. From the title we were credulous enough to believe that this was the main object of the book, but after reading it through, looking backward and forward, we have failed in finding any thing like a satisfactory account of it. Out of the 114 pages there are but about 7, from the 17th to the 25th, which are devoted to this purpose; and this is undoubtedly one of the leanest chapters in this most meagre book. We have no precise account of the weather, which preceded and accompanied this epidemic, no topographical description of that part of the city which was invaded by it, but every thing is left loose and indefinite. The inference from all he says, if in fact it be possible to draw any, is, that the wharves were the only spots from which this poison was distilled. Excepting the 7 pages above mentioned, and the appendix, which professes to be an account of the treatment, the rest of the book is made up of proclamations, letters of the city officers and compliments to them, provisions

* See Dr. H . . . ck's Letter, Evening Post, Sept. 2.

for the poor, some curious remarks on contagion, and matters and things in general.

Finally, we will say to Dr. R. that the above remarks have been drawn from us absolutely from a sense of duty. And although we are sensible that it will not seem credible to him, yet we can sincerely assert, that they are made "more in sorrow than in anger." With all its imperfections, and we think we have shewn pretty conclusively that they are neither few nor insignificant, we think we have seen evidences of considerable vivacity and force of character; powers, which, if properly disciplined, may in time be made to reflect honour on their possessor. But we would remind him "how hard it is to climb the steep where fame's proud temple shines afar." Literary reputation is not the product of a day, but is a plant of slow growth, and difficult cultivation. It must be reared with unceasing toil and perseverance, and after all, its productiveness is very precarious. A man who feels a generous aspiration for this distinction, must not rashly present himself before the public, but wait until, by a proper course of discipline, he shall be prepared to make good his pretensions. The public is a just, but inflexible judge. It makes no allowances for age or opportunity, but awards the prize to him who has won it.

A history of the introduction and use of Scutellaria Lateriflora, (scullcap,) as a remedy for preventing and curing Hydrophobia, &c. By Lyman Spalding, M. D. 8vo. pp. 30.—New York, 1819.

It would have been unnecessary, nay, perhaps improper, to notice this publication, did it not present so imposing an appearance. The mass of evidence which it professes to adduce, and the numerous cases which are therein reported in favour of the antidotal and curative virtues of the scutellaria, are calculated to command the faith of the vulgar, and perhaps even to secure the

confidence of some of the profession. It is upon this ground alone that we consider it proper and incumbent upon us to examine this pamphlet; for as it regards its execution as a literary production, or its importance as a medical work, it is absolutely not worth noticing.

We proceed to examine the evidence which it adduces in favour of the scutellaria, as a preventive and remedy for hydrophobia.

Perhaps we would be justified in rejecting the whole mass of testimony upon the sole ground that it is advanced in favour of a nostrum. So often have pretended specifics been imposed upon the public, and so repeatedly have the cases reported in proof of their virtues been detected as fabrications, that the very evidence itself may very generally be admitted against the very remedy it is intended to establish; perhaps, it should always be received with suspicion and distrust. Notwithstanding, we will patiently and impartially weigh the evidence detailed in Dr. Spalding's pamphlet.

We are informed by the writer that Dr. Van Derveer, the person who introduced this remedy into practice, did not pretend to keep it a secret. Perhaps it would not be too severe to say, that he merited all the odium attached to a secret-monger, upon the sole ground of his not promulgating and diffusing as extensively as possible, a knowledge of what he considered so invaluable a remedy. He did indeed, we are told, communicate his nostrum to several medical men: but did he not, in the instances enumerated, as was his custom in others, make it known under restrictions of secrecy? We believe that the writer is not correct in stating that Dr. Van Derveer imparted the secret to his son: for it has often been a matter of surprise, that he should have died at so advanced an age without communicating so inestimable a remedy to his own son, who was exercising his profession in a district peculiarly liable to rabies. This fact has justly given rise to the suspicion that the Doctor himself had no faith in the remedy; and that, although he professed to have an antidote to hydrophobia during his life, he was not willing to impose upon the credulity, or to excite a false confidence in the minds of posterity. This suspicion is confirmed

by the fact stated in the pamphlet, that he kept no notes of the cases in which he used it.

We are told that about 30 years ago two persons of Monmouth county, were bitten by a rabid cat, and that Dr. Van Derveer prescribed for them both, the use of his plant. One of them however having lost the medicine furnished him by the Doctor, and refusing to procure a fresh supply, died of hydrophobia. Could the writer seriously have expected that this story would have been received as evidence in so important a case, without any precise date, without the names of the parties concerned, without any vouchers for the correctness of the statement, or even any details whereby the reader might be convinced the disease was truly hydrophobia? This is the kind of evidence afforded by the experience of Dr. Van Derveer. Whether it will add any weight to his testimony, that he prescribed the scullcap in 400 cases of a disease which physicians, of advanced years and extensive practice, seldom have an opportunity of seeing, we leave the reader to judge. *Credat Judæus Apella, non ego.*

In the extract of a letter from Dr. Henry Van Derveer, the son of the former, we are informed of the cure of a Mrs. Bess by means of the scullcap, even after symptoms of hydrophobia had manifested themselves. How much credit is to be attached to this case may be determined from the uncertainty of the dog's madness, and from the fact that the writer of the letter adduces as voucher for his statement, but the opinion of a gentleman who heard some of the particulars related by another who resided in the neighbourhood. Certain it is, that if Mrs. B. had no other symptoms than those noticed by the writer of the letter, she had nothing that resembled hydrophobia.

The next case which is related is that of a young lady (whose name is not mentioned) who, notwithstanding the administration of the remedy, died rabid. So much for the testimony of the Van Derveers.

We are next told that Dr. Thomas Steele of Belville, N. J. was *reported* to have employed the scutellaria with success. But we are furnished with no cases which occurred in his practice, except that of a boy who died of hydrophobia under his care! It is

really surprising that an author can expect to receive the confidence of the public who is capable of advancing such feeble testimony in support of so great an innovation in medical practice.

We will close this part of our examination, by informing our readers that the facts and cases which are said to have occurred in the practice of Dr. Lawrence Van Derveer, were communicated to Dr. Spalding by the son of that gentleman, who, we have been informed, kept no records of his cases, and who, we have seen, died without imparting to him the secret.

Now let us ask, to what confidence is this remedy entitled?

The practice and success of the Lewises of Westchester county, New York, are next advanced to establish the claims of the scullcap. It is indeed true, that the stronger the testimony the more easy the conviction: but an accumulation of feeble and unsatisfactory evidences can never render a point clear and conclusive. A volume of suspicious testimony is nothing worth in a case where the very best evidence only should be received. To be entitled to credibility, a witness should be competent to give evidence:—hence the law rejects the testimony of drunkards, idiots, and children under a certain age. The testimony of a blind man would not be admitted in a case where eye-witnesses were required; nor would the evidence of a person that was deaf be received on a fact of which he could have had knowledge by hearing only. Extending this principle to the present case, the evidence of the Lewises is wholly inadmissable. For how is it possible that persons unacquainted with medicine can be qualified to judge of one of the nicest points of medical investigation? It is a good maxim of the law, that a person is to be believed on a point connected with his own occupation, rather than on any other subject; and the advice of the celebrated Apelles, to the insolent shoe-maker who pretended to detect a fault in one of his paintings, "*ne sutor ultra crepidam*," furnishes a salutary hint to those who would venture to pass an opinion on a subject of which they are ignorant.

We might examine the whole mass of evidence derived from Westchester, and we would find that, independently of the inconclusiveness of the facts, and the vague, and unsatisfactory

manner in which they are related, the persons upon whose authority they are presented to the public, were in no instance competent to give testimony. And it is remarkable that the experiments there recorded as performed by two *physicians*, were both unsuccessful! We come now to the case of *James Cann*, which perhaps has afforded more triumph and induced more confidence in scutellaria, than all the other testimony besides. A very cursory examination of the details of this case, as published by his medical attendant, will be sufficient to show that the disease under which he laboured was *not hydrophobia*. In the first place, as it regards the time of his attack: he was bitten on the 10th of June, and he began to complain on the 17th of the same month: now hydrophobia seldom appears in a shorter period than six weeks after the bite of a rabid animal; and perhaps has never been known to supervene earlier than the 10th day. We would not presume to pronounce it impossible that it should manifest itself before; but the appearance of Cann's disease on the 7th day is certainly a presumption against its being rabies. But his symptoms did not resemble those of hydrophobia. We are told that "his face was drawn towards the right shoulder, his head convulsively shaken, he ground his teeth with violence, &c." Now is there in hydrophobia any spasm of the muscles by which the head can be fixed towards the shoulder? Is their not, on the contrary, very free motion of the head? Is there any grinding of the teeth, or any other symptom of trismus observed in hydrophobia? But how do the rest of his symptoms accord with the character of this disease? "Liquids he took without difficulty, nor did pouring water from one vessel to another in his presence produce any perceptible distress; neither did the sight of a polished mirror, or the waving of a white curtain, sensibly affect him." How perfectly different is this from the description given of genuine rabies by the best authors. In the course of a day or two these slight spasmodic affections left him. But the scullcap had been plentifully administered, and received the credit of the cure.* Such

* It may be proper to notice that blood-letting had been performed in this case by some unauthorized person.

is the most decisive and triumphant instance of the efficacy of the scutellaria lateriflora!

The case communicated by Dr. Fisk of Massachusetts, is certainly the most plausible one that the pamphlet contains. But it is by no means conclusive; and upon its result, it would be unjustifiable to predicate a practice so entirely novel.

Dr Spalding informs us that Mr. Coleman, the editor of the N. Y. Evening Post, who had been very vociferous in lauding the virtues of scullcap, has repeatedly called on the public to make known a single well attested case of its failure; and triumphantly adds, that "no such case has yet appeared." James Cann, whose case we have just examined, has since the publication of Dr. S.'s pamphlet, *died of genuine rabies.* His physicians, who reported his former attack, have published a statement of his last disease. From their report it appears, that on the 3d of February 1820, nearly eight months after the bite, he began to experience premonitory symptoms of hydrophobia. On the 6th the disease manifested itself; and on the 8th he died. The scutellaria was administered abundantly, and in almost every form:—he was directed to chew it, he took it in the form of tea, and it was given by way of injection.

It is not necessary for us to exhibit a description of Cann's disease to convince our readers that it was genuine *rabies.* The statement given by his physicians has doubtless been seen by the majority of them: and every physician who visited him was convinced that it was hydrophobia. Attempts have been made to identify his two attacks; the descriptions given of them both need but be compared to convince the reader of their perfect dissimilarity. But whether they were the same, or different diseases, it matters not. Cann's case affords at any rate, one instance of complete failure!

We have thus presented our readers with a brief review of the evidence contained in Dr. Spalding's pamphlet, in favour of the prophylactic and sanative properties of the scutellaria; and we trust that we have made it appear, that the evidence is altogether unsatisfactory and inconclusive, and by no means such as to justify its employment to the exclusion of other means, that have

always prevented the disease when properly administered, and which have sometimes even effected cures. It is impossible to consider the case of Cann, without lamenting the credulity by which his life was sacrificed, and the obstinate prejudice, by which the use of the herb was re-commenced, notwithstanding its failure as a preventive. It is to be hoped that this instance will not be unimproved; but that it will be a salutary caution to physicians, not to tamper with the lives of their patients in trying the efficacy of nostrums.

H. D.

Chapman's Elements of Therapeutics and Materia Medica.

To watch over the interests of science, taste and learning, is the legitimate object of criticism. Whilst, in the performance of this important duty she is guided by sound principles, and a rational liberality, her labours must be honourable and beneficial. When, however, she descends from her high seat of judgment, to grope for trifling blemishes, or to cavil at imaginary ones, she ceases to be what she should be,—the foster-nurse of genius, talents, and learning. She becomes debased in her character, and instead of operating as a good, she is a serious and blighting evil.

Persuaded, then, that a vigorous, searching and chastening criticism, is essential to the due progress of science and literature, we are always glad to see our American medical works publicly examined, and their merits and demerits freely and candidly set forth. We were, accordingly, well pleased, on taking up the last number of the New York Medical Repository, to see that it contains a critique on the above named work. We anticipated, from the well known abilities of the learned editors of that journal, an ample and perspicuous exposition or refutation of the sentiments, and doctrines inculcated in the work in question. In this, however, we were considerably disappointed; for, instead of finding, what

we expected to find,—an exposition of the author's sentiments, with a fair account of the excellencies, and real faults of his book, we met with a series of animadversions, consisting in a great measure, of groundless objections, misconceptions of the author's doctrines, and unfair cavils.

The reviewer seems much displeased at Dr. Chapman's declaration, "that the efforts, in the United States, to advance that science (materia medica) *have been slender and imperfect.*" He expresses his displeasure too, at the little attention, bestowed by the author upon the cultivators of American botany; but, he particularly regrets, that Dr. C. appears never to have read Dr. Samuel Mitchell's account of the botanical history of North America. As to the assertion, that "the efforts in the United States, to advance the materia medica, have been comparatively slender and imperfect," we believe it to be substantially correct, when affirmed as it is by the author, with a reference to times anterior to the period, when our medical school began to flourish. That it is with a reference to this period that this declaration is made, is evident from what he says immediately afterwards. "As soon, however, as our medical school began to flourish, an attachment was awakened to the science, (of materia medica,) and it has since been considerably enriched from our native stores."

Before the period alluded to, very little had been done towards investigating the medicinal virtues of our native vegetables. Neither Bartram, nor Clayton, nor Humphry Marshall, nor Thomas Walter, did any thing in the materia medica, worth noticing. These men were eminent botanists; but we know nothing of them as cultivators of the materia medica. "Their inquiries," to use an author's words, "were directed rather to the botanical history than to the medicinal properties of plants." The omission, therefore, of these names, in a work treating of the materia medica, cannot be advanced against the author as a subject of censure.

The first person who collected any thing like a mass of observations relative to the American materia medica, was a German

botanist who came to this country, with the German troops, in the revolutionary war of the name of Shœpf. He published a work, in 1787, at Erlangen in Germany entitled, *Materia Medica Americana Potissimum Regni Vegetabilis.* Shœpf was a mere collector of facts; he derived much of his information from the late Rev. Henry Mühlenberg, as we have been personally informed by his son Dr. F. A. Mühlenberg of Lancaster. Dr. Chapman did not profess to give a work on the medical botany of this country, or a herbal for private families. His object was to furnish the public with a system of materia medica and therapeutics, conformably to the present improved state of medical science. He was therefore not obliged to commemorate our botanists and herbalists.

But we proceed to the critic's observations upon Dr. C.'s opinions relative to the *modus operandi* of medicines. Upon this point he enters into a long and learned discussion, to prove that there is no sympathy betwixt dead and living matter! and having with much pains and ingenuity made out this point, clearly, he thinks himself warranted to reject Dr. C.'s opinion, " *that medicines act by a local impression which is extended through the medium of sympathy.*" We are by no means disposed to differ from the reviewer's opinion, that there " can be no sympathy from dead to living matter;" or that " remedial substances do not furnish a peculiar and well adapted sympathy to the various diseases;" or, that " each individual article of the materia medica, is not endowed with occult attributes, to counteract a disease by sympathy " These are doctrines which we as heartily reject, as the critic himself. We only wonder why he should have taken so much pains to disprove them. Does he seriously believe that the " Pennsylvania professor" advocates such absurd opinions? If he does really think so, we do not wonder that he should " prefer," as he says he does, " the science of the cabalists, or judicial astrology to the sympathetic doctrines of Professor Chapman."

" *Sympathy,*" says the reviewer, means a " consensus in affectibus,"—" a conformity of thought and feeling"—" a power always in connexion with natural instinct, with thought or with the sensorium, which has no existence in the animal economy, or

in the operations of organic or vital laws, but originates from conformity or similarity of affections, passions, or feelings."

Thus, then, he uses the word sympathy, in its metaphysical or moral acceptation; which, though very correct, when employed in its primitive or radical sense, and applied to moral or metaphysical discourse, is yet far from being either correct or accordant with universal custom when applied in medical language. In medicine the word sympathy is used in a metaphorical sense. It is used to express a fact in the animal, precisely as the word *attraction* is used to express a fact in the physical world. If I see a mass of matter fall to the earth, I say that its descent is produced by *attraction*. If I stimulate the snyderian membrane of the nose, and the diaphragm is thereby thrown into convulsive action, I say that this action is caused by *sympathy*. And in employing the word sympathy here, I use it because its etymology expresses a consent of feeling, which is the very idea I wish to express, namely, that the diaphragm is thrown into action, because it has a consent of feeling with the snyderian membrane. According to the New York critic, however, this effect could not be produced by sympathy, because there exists no sympathy between snuff and the diaphragm!

All that is meant by the doctrine of the sympathetic operation of medicines is, that when they are applied to an organ, as for instance the stomach, they produce an immediate local action or impression on this viscus, which impression, independently of any further agency of its generating cause, is carried to other parts of the system by virtue of a law of the animal economy, which establishes an "intercommunion of sensation" between its various parts. That such connexions of parts do exist—that one part of the system may be affected by irritating another part, is so obvious, that it would be trifling to insist upon it. These connexions Dr. Chapman, in conformity with universal custom, calls sympathies. If this name, so applied, does not accord with the opinion of his reviewer, it is no reason for denying the reality of the object to which it is applied.

In the cure of diseases, this law of the animal economy is of extensive application. By it alone can we explain a vast number of the phenomena attending the application of remediate means;

such for instance as the effects of saccharum saturni in hemorrhage, emetics in hernia humeralis, ergot in the production of uterine contraction, &c. &c. With such facts before us, we confess that we are not a little startled, at the following sentiments of our critic. "The author (Dr. C.) speaks of diffusible powers regulating the various functions of life, creating excretions, and secretions, and in fine converting the state of disease into that of health; the whole to be affected by the power of sympathy! he might as well have said, that a magician's wand can call up winds and tempests, awake the dead, and reanimate shades, or intermingle apparitions and ghosts with the living." Had the writer not previously declared his preference to the cabalistic science and judicial astrology, over the doctrines of the sympathetic operation of medicines as advocated by Professor Chapman, we should be at a loss to account for this extraordinary paragraph.

There is indeed such a misticism—such a confusion of ideas—a *deliramentum doctrinæ*, in our reviewer's observations upon this subject, that the reader, *cæca regens vestigia*, finds it difficult, if not impossible to get through them, with even a tolerable conception of their import.

"We will now put in opposition," says this reviewer, "to the medical sympathies of Dr. C. the known results or visible operations of medicines. The first is, that notwithstanding the infinite multiplicity of diseases *to each of which remedial substances must furnish a peculiar and well adapted sympathy*, we find that but few modes of operation or attributes are comparatively distinctive in medicines." Here again the critic proceeds upon the false assumption that the author of the Therapeutics, advocates the ridiculous doctrine "of *medicines possessing a peculiar sympathy for diseases;* and that as there are a multiplicity of diseases, there must be a multiplicity of remediate sympathies furnished by the medicines!" But as he very wisely regrets such a doctrine, he concludes that Dr. Chapman's opinion relative to the operation of remediate articles, is also erroneous; namely, "that all medicines act by exciting a local impression which is extended through the medium of sympathy; that whenever a medicinal substance is applied to a susceptible portion of the body, externally or internally, an action is excited which is extended more or less, according to

the diffusibility of the properties of the substance, or the degree of sympathetic connexion which the part may maintain with the body generally. Thus a set of actions is raised, every one of which is precisely similar, provided they are confined to the same system; by which is to be understood parts of an identity of structure. If, however, the chain runs into the other systems it loses its homogeneous character; the actions being modified by the peculiar organizations of the parts in which they may take place "

The reviewer's assertion, that there are but few modes of operation, or attributes distinctive in medicines; or in other words, that the action of remediate articles is not very deversified; and that those which belong to a particular class, differ from each other only in the force and diffusibility of their effects, is, we conceive, altogether untenable. Reasoning *à priori*, we should infer, that, as no two substances are precisely alike in their physical qualities, and as the specific character of the effect upon the living system must be in a great measure determined by the nature of the agent, the impressions of remedies must be as various as the articles themselves. But direct observation and experience inform us that, although the articles of one particular class, as for instance cathartics, all resemble each other in their general mode of operation; that is, although they all evacuate the bowels, yet each article produces a peculiar impression, which modifies into various shades the general effects. Dr. Johnson, the ingenious author of the "Influence of Tropical Climates on European Constitutions," speaking of the employment of purgatives in the treatment of hepatitis, says, "In the choice of purgatives, much discrimination is necessary; for, however the modern scholastic physiologist and routine physician may laugh at the idea of cholagogues, hydragogues, &c. those few who personally observe the effects of purgatives on the fœcal discharges, have no doubt about the *peculiar* power which some medicines have in evacuating particuiar fluids, from their disposition to act on certain sets of secreting vessels." Upon this point, therefore, we perfectly agree with Dr. C. "My impression is," says he, "that scarcely any two agents produce entirely the same effects; and hence the infinitely diversified shades of disease, and the necessity for a

variety of remedies in the management of them." We cannot at present enter into the investigation of this proposition. It admits of interesting, deep, and philosophical disquisition. We may hereafter take up the subject in a separate article.

Upon the whole, it appears to us that the New York reviewer mistook the doctrines of his author: for we would not accuse him of wilful misrepresentation, or uncandid criticism. On a reperusal of what is said upon the modus operandi of medicines by Dr. C. we cannot but believe that he will acknowledge that he has been fighting against an imaginary object. We hope, at least, that he will soften his repugnance to the "Pennsylvanian professor's" doctrines, and relinquish his preference to "the science of the Arabs and the Cabalists."

We proceed now to the other remarks made upon the work in question. Dr. C. is censured for excluding the materia alimenteria from his book. It must be recollected that Dr. Chapman wrote on the *materia medica* and therapeutics. He leaves the consideration of *aliments*, to those who treat professedly on dietetics. These subjects may surely be treated separately with perfect propriety.

"In every work regard the writer's end."

"In every disease," says the learned critic, "of the present work, headed with the titles, *astringents*, *stimulants*, or *sedatives*, &c. nay, in every individual treatise of articles belonging to an identical class, we find that the learner must unlearn that a medicine is good but for one thing; and on the other hand he must learn that it may be applied in different views or indications, and that the same is equally remedial to diseases of opposite characters." This is another of those sweeping and perplexing sentences which it is almost as difficult to solve as one of those *schema cabalistica*, which the critic seems so much to admire. It may, however, be resolved into this form; a medicine is good for one thing only; it cannot therefore be applied in different views, nor can it be equally remedial to diseases of opposite characters. Let us see how this accords with observation. Opium is good to procure sleep, but opium will also produce vigilance; opium stops diarrhœa, so does it purge in some cases of colic.

Our time is too short to allow us to go regularly through the review; we will merely remark in conclusion, that we regard it as extremely unfair to criticise upon terms and expressions that stand corrected in the author's errata. The word tormina, which is printed tormena in the body of the book, is the only one noticed by our critic, in proof of his assertion that "Dr. C.'s book abounds in incorrect technical and classical words." If he had looked into the erratum he would have seen his criticism anticipated and disarmed by the author himself.

We are far from regarding Dr. Chapman's book as being free from blemishes. We have already on a former occasion, expressed our disapprobation of some of its parts. Notwithstanding, however, this declaration, we consider it as decidedly a book of the first rank of its kind. In England and in Germany it has received honourable testimonials of approbation; and at the very moment while we write this, we learn that the highest mark of approbation has been conferred on it in Russia. In concluding this article, we cannot refrain from expressing the hope, that while a generous competition is maintained by the medical schools of our country, no mean jealousies or paltry passions will be permitted to creep in and deform the pages of the journals dedicated to the same important and beneficial purposes.

To Dr. T. M. Hall.

After having read your letter published in our last number, with much attention, and again read Dr. Hare's pamphlet on the calorimotor, we still adhere to the opinion we before expressed, that this instrument can only be considered, in fact and in principle, as an extension of the elementary battery of Wollaston.

Tromsdorf, Thenard, Fourcroy, Vauquelin, and particularly Children, have demonstrated that the electrical action of the battery is not increased by the increase of the size of the plates, but by the increase of the numbers of pairs; and that, on the

contrary, the evolution of heat is increased with the size of the plates. In conformity with these principles, Dr. Wollaston constructed an apparatus of two plates only; and found, that by thus lessening the number of the plates, although very small in size, heat was powerfully evolved without a proportional production of electrical effect. If professor H. therefore wished to produce a very powerful evolution of heat without a concomitant production of electrical phenomena, his course of proceeding, with a knowledge of the above facts, was at once simple and obvious: For, observing that Dr. W. produced an evanescent ignition, with an apparatus of *two* very small plates, and knowing from the experiments of Children, &c. that the heat-evolving power is increased by increasing the *size* of the plates, without increasing their number, it was plain, that for the attainment of his purpose, (i. e. the powerful evolution of heat) he had only to increase the *size* of Wollaston's apparatus of *two* plates. The professor accordingly constructed an apparatus, which, by the arrangement of a number of plates forms it into one of two very large plates only. Hence Wollaston's apparatus, is one of *two small plates*, and Dr. Hare's one of *two large plates;* and as in the former and smaller one, only an evanescent ignition is produced, so in the latter and larger one, a very powerful ignition is effected.

It may be proper to mention, that although Wollaston at first constructed his elementary battery on an extremely small scale, yet he afterwards enlarged it very much. Professor Coxe, also, for several years past has been in possession of an enlarged apparatus of *two* plates with which powerful ignition is readily produced.

As a mechanical contrivance, we consider Dr. H.'s apparatus quite ingenious. His theory, too, of galvanism is, as far as we know, new, and in our estimation entitled to much credit.

These remarks are made in justification of an opinion we expressed on this subject, in a former number of this journal, and which your letter is intended to controvert. We are far from wishing to detract from the well known merits of Dr. H.; but both inclination and duty prompt us, at all times, to "*give unto Cæsar that which belongs to Cæsar.*" EDITOR.

ANALECTA.

To the Editor of the American Medical Recorder.

I SHOULD not have obtruded upon the medical public, this continuation of the Hindoo practice of physic, had I not promised it for insertion in the next number of the Recorder. It will notwithstanding, I hope, have its use, by evincing the vast superiority which rational theory maintains over ignorant and superstitious empiricism, and cannot fail to inspire the *American* physician with gratitude to a beneficent Providence, who has placed him in a land, wherein LIGHT, religious, civil, and scientific, is poured with unexampled effulgence upon his expansive and unshackled mind.

E. A. ATLEE.

" OF THE CURE OF DISEASES.

" If a fever arise from an excess of what is called amŭ,* the proper medicines for promoting a discharge of this should be administered; for if improper medicines be given so as to confine this within the body, the patient's life will be in great danger. If a person have a small degree of fever, he should have proper medicines, but he must avoid such as are given only in strong fevers, as medicines compounded with poison.

" If a fever continue till a late hour in the evening, there is no hope from medicine. The fever which is attended with hiccup, cough, difficulty of breathing, and insensibility, will produce insanity. In a fever in which wind, bile, and rheum prevail, and produce pains in the heart, anus, penis, sides, and joints, wherein also the body becomes entirely feeble, the belly swells, and evacuations almost cease, the patient must die. When a patient is

* The mucus which is perceived in the natural discharges in a diarrhœa.

afflicted with fever, attended with constant evacuations, thirst, burning heat, insensibility, difficulty of breathing, hiccup, pains in the sides, swooning, &c. the physician may abandon his case as hopeless. If a very aged person have a fever, accompanied with the following concomitants, viz. difficulty of breathing, pain in the breast, and thirst, if he be also very much reduced in body, he cannot recover. If a person in a fever suffer from violent evacuations, and these suddenly cease, a disease called grihinēē will follow, and from this ŭrshŭ*, in which, at the time of the evacuations, the patient will have excruciating pains, and part of the intestines will descend to the mouth of the anus. The disease called ŭrshŭ may arise from improper food, as well as from inactivity, from much sleep in the day, or from excessive sexual intercourse.

" When a person is affected with a small degree of fever, he must take a small quantity of shoont'hēē (dried ginger), dévu-daroo (the pine or fir-tree), ahunya (coriander seed), vrihutēē (solanum fruticosum), and kuntukarēē (solanum jacquini), pound them and boil them in a pound of water till the water is reduced to one fourth; then strain it through a cloth, and put into it a very small quantity of honey. This is one dose. If the fever increase, he must use the following prescription: Take of kŭntŭkarēē (solanum jacquini), goonloonchŭ (menispermum glabrum), shont'hēē (dried ginger), chirata (gentiana chayrayta), and koorŭ (unascertained), prepared in the way mentioned above.

" If a person be afflicted with a fever arising from wind, he must take the bark of the vilwŭ (ægle marmelos), shona (bignonia indica), gambharēē (gmelina arborea), paroolu (bignonia suaveolens), and gumyarēē (premna spinosa), and prepare them as above.

" For a bilious fever, the following remedy may be taken: The leaves of the putolu (tricosanthes dicœca), barley, and the bark of the kupitht'hu (feronia elephantium), prepared as above: By taking this medicine, the bile, burning heat, and thirst will be removed.

" To remove burning heat from the body, take the husks of ahunga (coriander seed), and let these soak in water in the open

* The Piles. (Probably Dysentery.)

air all night, and in the morning strain them through a cloth, and having added sugar, give the water to the patient.

" For a bilious fever, take the stalks of kshetrupapura (oldenlandia triflora), ruktuchundunu (adenanthera pavonina), vilwu (ægle marmelos), and shoont'hee (dried ginger), and boil them in a pound of water till it is reduced three fourths, and then add a little honey. For the same complaint, take the roots of moot'ha, (cypherus rotundus), the wood of ruktuchundunu (pterocarpus santalinus), the stalks of kshetrupapura (oldenlandia triflora), kutkee (justicia ganderussa), and vilwu (ægle marmelos), the leaves of the putolu (tricosanthes dicœca), and the bark of vilwu; boil them in water, and prepare them as above.

By this remedy sickness in the stomach, thirst, and burning heat will be removed. In a fever, by anointing the head with the fruit of choomee-koomoora (convolvulus paniculatis), the husks of the fruit of darimu (pomegranate), the wood of lodhu (simplocos racemosa), and the bark of kupitht'hu (feronis elephantium), thirst and burning heat will be removed, as well as by rubbing the juice of the leaves of the koolu (zizyphus jiyuba), on the palms of the patient's hands and on the soles of his feet.

" To remove a fever arising from rheum, bruise the leaves of nisinda (vitex trifolia) and boil them in a pound of water till three parts have evaporated, and then add the bruised fruits of pippŭlēē (piper longum).

" A cough, difficulty of breathing, fever, thirst, and burning heat, are all removed by the bruised fruits of the kŭt (mimosa catechu), koorŭ (simplocos racemosa), kankra (cucumis utilitissimus), and shringēē, and a small quantity of honey.

" The hiccup just before death is relieved by giving to the patient the bruised fruits of the pippŭlēē mixed with honey.

" A fever arising from wind and bile is removed by a decoction prepared from shoont'hēē, goolŭnchŭ (menispermum glabrium), moot'ha, chirata, kŭnlŭkaree, vrihŭtēē, shalŭpŭrnēē, (hedysarum gangeticum), chakoolya (hedysarum lagopodiodes), and gokshoorēē (tribulus lanuginosus).

" A fever arising from the same cause is removed by a decoction prepared from shoont'hee, ahŭnyakŭ (coriander seed), nimbu

(melia azadirachta), pŭdmŭ (nymphœa nelumbo), and rŭklŭ chŭndŭnŭ.

"A fever arising from bile and kŭph is removed by drinking the juice of vasŭkŭ leaves (justicia adhatoda) mixed with honey. A fever arising from the same cause is removed by a decoction prepared from kŭntŭkarēē, goolŭnchu, vamŭnhatēē (siphonanthus indica), dooralŭbha (hedysarum alhagi), chirata, rŭktŭ chŭndŭnu, kutkee (not ascertained), shoont'hee, Indruguvu (wrightea antidysenterica), mootha and putolu. This decoction removes thirst, burning heat, want of appetite, vomiting, cough, pains in the side, &c. A similar fever is removed by a preparation mixed with honey, composed of goolunchu, Indryuvu, nimbu, putolu, kutkee, shoont'hee, mootha, ruktuchundunu. This remedy removes rheum, burning heat, vomiting, nausea, thirst, pains in the body, &c.

"A fever of long continuance is removed by a decoction prepared from shona, paroolŭ, gambharee, gŭniarēē, vilwu, chakoolya, gokshoorēē, vrihutee, kuntukarēē, and shalupurnēē.

"In a slight fever arising from rheum, take a decoction made of the last mentioned ten things, adding chiruta, goolunchu, shoont'hee, and moot'ha. A fever arising entirely from rheum is removed by a decoction made with the preceding fourteen articles, goolunchu excepted, adding gooju pippulēē, (this, according to some, is a species of pepper, but others call tetranthera apetala by this name), Indruyuvu, de'vu daroo, ahunyaku and dooralubha. This is a very efficacious remedy.

"To remove swellings in the extremities, rub the parts affected with an ointment prepared from the bark of koolut'hu (dolichos biflorus), the fruit of kut, shoont'hee, and the bark of kuruvēē (nerium odorum). For the same complaint apply to the swollen members an ointment prepared from tava (a sort of lemon), gunyaree, shoont'hee, and dévu-daroo.

"For a fever of long standing, milk is excellent, but in a recent fever is very pernicious. For a fever under which the patient has long suffered, a decoction is prepared with kuntukarēē, goolunchu and shoont'hēē, mixed with pippulee and honey. For the same kind of fever, the patient may take a similar dose made

with ohatrēē (grislea tomentosa), hureetukee (terminalia citrina), pippulee, shoont'hee and gorukshu (not ascertained), mixed with sugar.

"The following account of the method of preparing anointing oils, and different poisons, is taken from the work called Sarukoumoodee. These oils are to be prepared from tilu (sesamum orientale) in quantities of 32lbs, 16lbs, and 8lbs. They are to be boiled until no froth arise at the top, even after a green leaf has been thrown into the pan. The following ingredients, having been washed and pounded, are to be thrown into the boiling oil by degrees, and boiled several hours, and then taken out of the pan, viz. lodhu (simplocos racemosa), the roots of nalooku (unascertained), the wood of bala, (unascert.) and mungisht'ha (rubia mungista), the fruit of amulukee (phyllanthus emblica), hureetukee, and vuhura (terminalsa belerica), the roots of ketukee (pandamus odoratissimus), the raw roots of huridra (curcuma longa), and the roots of moot'ha. To these are to be added and boiled till perfectly mixed with the oil, a large quantity of whey and gum-water, also ruktuchundunu, bala, nukhee, (appears to be a dried shell fish,) kooru (unascert.) mungisht'ha, joisht'heemudhoo (liquorice), shoiluju (naphtha), pudmukasht'hu (unascert.) shurulu, (unas.) devu-daroo, éla (alpinia cardamomum), khatasēē, (unascert.) nageshwuru (mesica ferrea), tezuputru (laurus cassia), shilarusu (naphtha), mooramangsēē (spikenard), kakulēē (unascert.) pryingoo (unascert.) moot'ha, huridra, daroo-huridra (yellow saunders), ununtu-mōōlu (periploca indica), shyama-luta, (unascert.) luta-kustooree (unascert.) liwungu (cloves), ugooroo (amyrisa agallochum), koomkoomu (saffron), goorutwuku (unascert.), renooku (unascert.), and suloopha (anethum sowa). To give this ointment a fragrant smell, as well as contribute to its virtues, the following ingredients are to be added, viz. èla, chundunu (santalum album), koomkoomu, kakoolee (unascert.), jutamangsee (valerian jatamansa), shuthee (unascert.), tezu-putru, shurulu, shila ursu, kurpooru (camphor), mrigunabhee (musk), luvungu, nukhee, méthee (trigonella fœnum grœcum), ugooroo, ékangu, (unascert.) These oils are called chundunadee.

"The following is the method of making a medicinal oil, called vishnoo-toilŭ, which is esteemed of great use in diseases caused by the prevalence of wind in the system. First the oil (32, 24, 16, or 8lbs) must be boiled as before, then the ten ingredients before mentioned, being washed and pounded, must be thrown in, boiled for six hours and then strained; after which a quantity of goat's milk, and the juice of the shŭtŭ-moolēē (asparagus racemosus), must be placed in the pan, and boiled again for several days, till it has the appearance of oil. After this, the following ingredients, having been previously washed and pounded, must be added; moot'ha, ushwŭgŭnda, (physalis flexuosa), jēērŭkŭ (anise seed), rishivŭkŭ (unascert.) shŭt'hēē (unas.), kakulēē (unascert.), ksheeru kakulee (unascert.), jeevuntee (celtis orientalis), joisht'hee-mudhoo, muhooree (an aromatic seed), dévu daroo, pudmu-kasht'hu (unascert.), shoiluju (apparently a sort of moss), soindhuvu (rock salt), jutamangsee, éla, goorutwuku, (a sort of bark), kooru (unascert.), ruktuchundunu, munjisht'ha, mrigunabhee, chundunu, koomkooma, shalupurnee (hedysarum gangeticum), koondooroo (frankincense), getald (unascert.), and nukhee. To render the oil fragrant, the ingredients before mentioned must be added and boiled. The boiling will occupy fifteen or twenty days.

"Another oil called gooroochyadee, is prepared with the same ingredients as those already mentioned, but instead of goat's, cow's milk is used; and instead of the articles which succeed the milk in the former prescription, the following are to be used, viz. ushwugundu, choomikooshmandu (convolvulus paniculatus), kakoolee, ksheerukakoolee, ruktuchundunu, shutumoolee, gorukshu (unascert.), chakoolya (hedysarum logopodioides), gokshooruku (tribulus lanuginosus), kuntukaree, vrihutee, virungu (unascert.), amulukee, hureetukee, vuhura, rasna (unascert.), ununtumoolu (hemisdemus indicus), jeevuntee (celtis orientalis), pippuleemoolu (the roots of piper longum), shoont'hee, pippulee, murichu (black pepper), somuraju (serratula anthelmintica), chekupurnee (bignonia indica), rakhulushusa (unascert.), gétala, munjisht'ha, chundunu, huridra, suloopha, and suptuchuda. This oil is used for removing diseases originating in excess of bile.

"A medicine prepared with the poison of the krishnusurpu (the cobra capella), is thus described: Having seized one of these snakes, and extracted the poison to the amount of half a tola, mix and boil it in 40lbs. of milk, and a quantity of curds, and let it remain thus for two days, after which it must be churned into butter. Next, boiling the butter, mix with it nutmegs, mace, cloves, and the roots of several trees; after they have been well boiled together, pound the whole very small, mix it with water, and make it up into pills as small as mustard-seeds. When a person is apparently in dying circumstances, this medicine is administered, mixed in cocoa-nut water; first the patient must take a single pill, and if there be no apparent relief, a second may be given. Another medicine of the same kind is thus prepared; the snake is to be seized, and a string tied round its neck till the mouth opens, after which some nutmeg, cloves, mace, and other spices must be thrown into its mouth; which is then to be closed again, and the snake placed in an earthen pan, and covered up closely. The pan is next to be placed upon the fire, and kept there till the poison is completely absorbed in the spices, which are then to be taken out of the mouth and dried, and after an experiment of their efficacy on some animal, are to be pounded, and given to the patient as snuff, or in small pills.

"Another way of preparing poison as medicine, is by extracting it from the mouth of the snake, and mixing it with milk, which is next boiled, and made into butter, with which the juice of certain roots is mixed.

"These poisons are administered when all other remedies fail, and when there is but little hope of recovery: the most extraordinary cures are said to have been performed by them, even after persons have been partly immersed in the Ganges, under the idea that all hope of life was gone. The medicine is said to throw the patient into a state of insensibility, and immersion in the water, it is supposed, assists the operation of the poison."

Incision of a Stricture of the Urethra.

A MAN, aged 77 years, was admitted into the Clinical Institution at Halle, with stricture of the urethra. From long delay before he applied for assistance, inflammation of the bladder had already taken place. The patient would not listen to any proposal of puncturing the bladder, nor indeed of any operation whatever. Professor Dzondi had a strong silver catheter suddenly prepared, so that about a line's length of the shut end of the instrument was cut away, and into the opening a lancet-shaped knife inserted, which by a simple mechanism could be drawn back and pushed forwards on applying the finger to the extremity of the straight part of the catheter. As the patient supposed this to be a common catheter, he allowed it be brought into the urethra. As soon as Professor Dzondi had brought its extremity firmly into contact with the stricture, which was near the neck of the bladder, he pushed the knife forcibly onwards, and immediately conducted the catheter into the bladder. The urine trickled through the instrument, and on withdrawing this, was discharged freely. But the assistance came too late. The old man died on the second day after. On dissection, considerable inflammation and commencing suppuration of the bladder were observed. The neighbouring parts of the abdomen also were inflamed.*

Kurze Geschishte des Institute Chirurgia und Augenheilhunde zu Halle, 1818.

* This important operation, was successfully performed by Dr. Physick as early as the year 1794; and was afterwards repeatedly performed by him "without ever having been followed by any unpleasant consequences. The instrument for performing this operation was a canula or catheter curved in such a manner as to pass readily as far as the stricture; in this canula was concealed a lancet, capable of being protruded when necessary. The operation was performed by introducing the instrument as far as could be done, and then the lancet was protruded." Vide Dorsey's Surgery, vol. 2, page 163.

PHILADELPHIA MEDICAL SOCIETY.

Session of 1819 *and* 1820.

At the annual election of Officers, the following gentlemen were elected for the ensuing year:

President—William P. Dewees, M. D. *vice* N. Chapman, M. D. resigned.

Vice-Presidents— { Joseph Parrish, M. D. / J. R. Coxe, M. D.

Corresponding Secretaries— { John Barnes, M. D. / John Eberle, M. D.

Treasurer—Samuel Steward, M. D.

Orator—William P. C. Barton, M. D.

Librarian—Geo. G. Tresse, M. D.

Curators— { Dr. Tresse. / Mr. Underwood.

The following gentlemen were elected Honorary Members of the Medical Society during the late session.

G. S. Pattison Esq.	Surgeon.
Dr. Gibson.	
Dr. Emlen.	
Dr. W. Price.	
Dr. E. Barton.	
Dr. Worthington.	
Dr. Charles H. Graves,	Virginia.
Dr. R. P. Waller,	do.
Dr. A. D. Galt,	do.
Dr. Stirling Ford,	do.
M. M. M. Duvigneau,	Paris.
M. M. Parent,	do.
Mr. C. A. La Sueur,	Philadelphia.
Dr. Jason Lawrence,	do.
Dr. Moseman,	do.
Dr. H. Bond,	New Hampshire.
Dr. M'Connell,	do.
Dr. Heineken,	Bremen.
Dr. A. Frutos,	Madrid.

The following gentlemen have been admitted as Junior Members.

Jacob S. Browne, Benj. I. Pennock, Richard Dutton, John G. Whilldin, Daniel T. Coxe, James H. Ewing, Isaac Winters, Jacob S. Rose, John Russel, Thomas M'Euen, Samuel M. Fox, John M. Paul, Samuel G. Morton, Ezekiel C. Cook, Charles Fahnestock, John Leamer, Aquilla Jones, Charles Baum, John S. Douglass, Isaac Ott, Job G. Orslere, John S. Givin, James Ritcher, Thomas Hunt, William Maclay Awl, William B. Scott, William Johns, *Pennsylvania.*

George Green, David P. Hunt, Charles F. Matlock, George Haines, Oakie H. Costill, William Page, *New-Jersey.*

Stephen White, William Grey, *Maryland.*

William S. Price, Winslow Alexander, Littleton H. Coleman, Joseph W. Hillyard, Aza Beale, *North Carolina.*

Samuel Turner, *District of Columbia.*

Jonas Underwood, *Rhode Island.*

Isaac N. Williams, Horace W. Branham, Wyatt Christians, Jones O. Christians, George W. Morris, Jones C. Clopton, William W. Stewart, Mann P. Nelson, John T. Semple, Henry E. Shore, William M. Maxwell, Littleton G. Coleman, Robert C. Niblett, John Hendree, Charles C. Byrd, William G. Smith, Robert H. Cabell, Abner Nash, Thomas P. Hoge, William W. Fennell, Roger Q. Dickinson, S. Mordicai, Howell P. Crowder, Reuben H. Dejernatt, Claiborne Jones, William A. Fuqua, John M'Lean, James M. Scott, James Sommerville, jr. William Stith, Robert D. Starke, Phillip D. Williamson, Wilson Loving, *Virginia.*

Robert L. Armstrong, Nathan Turner, Thomas J. Flinn, Henry M'Adin, Robert M. Young, Edward Cuthbert, *South Carolina.*

James P. Screven, William F. Buchanan, Robert J. Ware, T. B. Gorman, *Georgia.*

Richard M. Coffers, Temple E. Gayle, John F. Bell, *Kentucky.*

Thomas Flanner, *Ohio.*

St. Clair T. Caldwell, W. T. Rucker, James G. M'G. Ramsay, Wilson Faulk, William C. White, Joseph B. M. Reese, *Tennessee.*

JAMES M. STAUGHTON, *Sec'y.*

The following gentlemen lectured to the society during its last session.

Dr. Meigs, lectured on Cholera Infantum, Nov. 13th, 1819.

Dr Parrish, lectured on Ossified Arteries, and on their action, Nov. 20th.

Dr. Atlee, lectured on the Physiology of Conception, Nov. 27th.

Dr. Dewees, lectured on Phlegmasia Dolens, December 4th.

Dr. M'Clellan, lectured on the Passage of Fluids from the Stomach to the Bladder, Dec. 11th.

Dr. Barton, lectured on Animal Life, Dec. 18th.

Dr. Stewart, lectured on the Modus Operandi of Medicines, on the External Surface of the Human Body, Dec. 25th.

Dr. Wood, lectured on the pulse, as a Symptom of Disease, January 8th, 1820.

Dr. Harris, lectured on the identity of Hereditary Diseases, Jan. 22.

Dr. Eberle, lectured on the Humoral Pathology, Jan. 22.

Dr. Bache, lectured on the Medical Philosophy of Dr. John Brown, Jan. 29th.

Dr. Jackson, lectured on Digestion, February 5th.

Dr. Rousseau, lectured on the Humoral Pathology, Feb. 12th.

MEDICAL COMMENCEMENT.

At a public commencement held at the University of Pennsylvania, April 6th, 1820, the following gentlemen received the degree of Doctor of Medicine—viz:

Massachusetts.

Dudley Atkins,	On Hernia.
Francis D. Wait,	Cholera Morbus.

New-Jersey.

Jeremiah S. English,	Scutellaria Lateriflora.
Marmaduke Burrough,	Uterine Hemorrhage.
George Green,	Murias Ammoniæ et Ferri.
Charles F. Matlack,	On Tetanus.

Pennsylvania.

John L. Atlee,	Hydrocephalus Acutus.
Rene La Roche	Inflammation of the Testicles.
John Steel Givin,	Rheumatism.
David N. Mahon,	Cancer.
Charles F. Wilstack,	Rest in Diseases.
Benjamin J. Pennock.	Hepatitis.
Isaac Thomas,	Phlegmasia Dolens.
Richard Dutton,	Tetanus from Wound.
Samuel P. Reese,	Oleum Terebinthinæ.
Isaac Davis,	Prussic Acid.
John F. Lambe,	Acute Rheumatism.
John Paxton,	Epilepsy.
Stewart Kennedy,	Dysentery.
Robert E. Griffith,	On the Stomach.
Isaac Hays,	On Sympathy.
John Elliott,	Oleum Terebinthinæ.
John G. Whilldin,	Dropsy.
Samuel George Morton,	Popliteal Aneurism.
Jacob S. Rose,	Cynanche Trachealis.

Delaware.

John M'Callmont,	Dysentery.
Thomas Shivers,	On Tetanus.

Maryland.

Francis M. Goldsborough,	Angina Pectoris.
Richard Anderson,	Amenorrhœa.

Virginia.

William H. Finch,	Necrosis.
John T. Semple,	Hydrophobia.
Gustavus V. Jones,	Bilious Inflammatory Fever.
William Jones,	Gastritis.
G. Lane Corbin,	Aralia Spinosa.
Americus V. Payne,	Cholera Infantum.
Peter F. Archer,	On the Liver.
George A. Spiller,	Hepatitis.
Robert W. Withers,	Gastritis.
Le Roy Branch,	Tetanus.
William Dew,	Strictures in the Urethra.
Samuel W. Washington,	Diarrhœa.
William B. Scott,	Cynanche Trachealis.
Robert P. Richardson,	Gonorrhœa.
James S. Gunnell,	Dysentery.
Luke White,	Cholera Infantum.
William H. Worthington,	Tetanus.
Turner Shell,	Scutellaria.
Christopher B. Fleet,	Hereditary Predisposition.
Isaac Williams,	Dyspepsia.
Otway Bailey,	Rheumatism.
Abner Nash,	Anasarca.
John C. Richardson,	General practical reflections upon the pathology and treatment of Dyspepsia or Indigestion, and its connection with several acute and chronic diseases.
John F. Brooke,	On Diseases of the Hip joint.
Thomas J. Goode,	Puerperal Fever.
Philip D. Williamson,	On Fever as it appeared in part of the counties of Loudoun and Fauquier.
Alfred Eldridge,	Monarda Punctata.
James May,	Hæmoptysis.

South-Carolina.

George Cuthbert,	Phlegmasia Dolens.
Robert L. Armstrong,	Croup.
William Champneys Stewart,	On Generation.
Andrew Bonner,	Chimaphila Maculata.
Edward D. C. Jenkins,	On Cold Bath in Fevers.
Daniel D. Graves,	On Turpentine.

Ohio.

Thomas Flanner.

Georgia.

Thomas Hamilton,	Cholera Infantum.
William F. Buchanan,	Acute Rheumatism.
James P. Screven,	Hepatitis.
Samuel C. Oliver,	An essay on the causes which prevent the progress and usefulness of Medical Science in the United States.*

Kentucky.

William Clark,	Peritonitis.
John C. Boyd,	Typhus Fever.

Tennessee.

William C. White,	Pneumonia.
Alexander M'Call,	The disease induced by milk possessing noxious properties, in consequence of milk cows feeding on a certain plant.
William M. Watkins,	Structure and functions of the skin.

Missouri.

Joseph Browne,	Intermittent Fever.

In our last year's list of graduates of this University, the name of Alfred L. Munson, a graduate from Connecticut, should have been printed *Alfred S. Monson.*

Having been refused an official list of the graduates of this University, by the *Dean*, we were not able to collect all the names of the gentlemen who graduated this season. The whole number, we understand, is 79. The names not mentioned in the present list, will be given in our next number.

UNIVERSITY OF MARYLAND.

The Faculty of Physic held its public commencement in the Chemical Hall of the University, on the 3d day of April, when the following gentlemen having complied with the statutes of the institution, received the degree of Doctor of Physic, viz.

Robert Shelmerdine, of Baltimore. On Paronychia.
Washington Duvall, D. of Columbia. Hysteria.

* This Thesis is published

Edward T. Farish, of Virginia. De Epilepsia.
Henry Haw, D. of Columbia. On Tetanus.
Benjamin Winwood, of Baltimore. Modus Operan. of Medicine.
Samuel K. Jennings Junr., do. Hepatitis.
Robert Goldsborough, Maryland. Cynanche Trachealis.
William L. Lambeth, Virginia. Hereditary Diathesis.
Charles L. Gardiner, Maryland. External application of Tartarised Antimony.
Alfred W. H. Elwes, Pennsylvania. On Heat.
J. H. H. Penn, Maryland. Cynanche Trachealis.
Thomas Blake, Do. Hepatitis.
Joseph Garnet, Virginia. Dysentery.
Benjamin Dickson, Baltimore. On the Atmosphere.
Alonzo Preston, Maryland. Cephalalgia.
John Frazier, Junr. Do. Digestion.
Matthew J. Allen,* Do. De usu Medico Frigoris.
John Kennedy, Baltimore. Hectic Fever.
John D. Middleton, Maryland. Hepatitis.
Edward H. Birchett, Virginia. Hydrothorax.
John T. P. Yeargain, S. Carolina. Scrofula.
James Robertson, Maryland Digestion.
Robert Dorsey, Do Enterites.
James Duke, Do. Cynanche Trachealis.
Samuel L. P. Roberts, Baltimore. An attempt to ascertain the cause of the extensive inflammation in wounded cavities.
Michael King, Virginia On Conception.
Daniel Scott, Maryland. On Asthma.
Daniel Hook, Georgia. On Materia Medica.

The degree of Bachelor of Physic was conferred on Geoege W. Bœrstler, of Maryland.

The honorary degree of Doctor in Physic was conferred on Thomas M. Hall, of Philadelphia.

The Degree of Doctor in Divinity was conferred on The Rev. William E. Wyatt, of Baltimore.

* The medal was adjudged to Matthew J. Allen, being the author of the best Latin Thesis.

UNIVERSITY OF NEW-YORK.

At the annual commencement of the College of Physicians and Surgeons of the University of the state of New-York, held on the 4th of April 1820, the degree of Doctor of Medicine was conferred on the following thirty-six candidates, who had been regular students of the University, and complied with the statutes of the state relative to the practice of Physic and Surgery, and the ordinances of the honourable the Regents of the University of New-York.

Isaac Anderson, Pennsylvania. On Conception.
James Anderson, New-York. On Neuralgia.
William Booth, Junr. Virginia. On Dysentery.
Cyrenius H. Booth, Connecticut. On Epilepsy.
Larkin Bass, North Carolina. On the Functions of the Skin.
Thomas Wilson Henry, New-York. On Typhus Fever.
Charles W. Goodwin, Virginia. On Amenorrhœa.
Hezekiah C. Parks, Georgia. On Bloodletting.
Lackington C. Randle, Georgia. On Bloodletting.
Warner Jones, Virginia. On Urinary Calculi.
Edward G. Rawlings, Tennessee. On Urethritis.
Isaac J. Grimball, South Carolina. On Ascites.
Richard K. Hoffman, New-York. On Burns.
Andrew B. Ewing, Tennessee. On Dropsy.
William B. Rogers, Georgia. On the Diseases of Georgia.
Benjamin Isherwood, New-York. On Hydrophobia.
Le Roy Holt, Georgia. On Bilious Remittent Fever.
Wm. J. Harris, South Carolina. On Cynanche Trachealis.
Landon Clanton, North Carolina. On Dyspepsia.
John P. Thomas, South Carolina. On Gonorrhœa Dormientium.
Wm. M'Carthy, New-York. On Aneurisms.
Shadrack Gasque, North Carolina. On Arsenic.
John J. Vestervett, New-York. On Hydrocephalus.
Albridgton Brown, North Carolina. On Odontalgia.
Wm P. Reddick, Virginia. On Consumption.
Jesse Batey, South Carolina. On Suspended Respiration.
Samuel Breck, Alabama. On Pneumonia Typhoides.
David C. Freeman, North Carolina. On Diabetes.
Benjamin Ogden, New-York. On Amputation.
Thomas A. Duffy, New-York. On Carbon.

Isaac J. Rapelye, New-York. On Varicose Veins.
Albert Smith, New-York. On Respiration.
Wm. R. Bay, South Carolina. On Icterus.
Charles Davis, New-York. On Disorders of the Digestive Organs.
Francis U. Johnson, New-York. On Lues Venerea.
James C. Townsend, New-York. On Climate.

ERRATA.

In page 277, line 7 from bottom, for *regrets*, read *rejects*.
In page 274, line 7 from bottom, for "*an author*" read our author.